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ABSTRACT

In response to the Drug-Free Schools and Communities Act of 1986, a national study of alcohol use on college campuses was undertaken from 1989 to 1991. The study used the Core Alcohol and Drug Survey which was administered to students at 56 four-year institutions and at 22 two-year institutions for a total student count of 58,625. Analysis of the data produced findings such as the following: (1) alcohol, tobacco, and marijuana (in that order) were the most widely used drugs on campuses; (2) 5 times as many males as females consumed 21 or more drinks per week; (3) in four-year institutions, 1 in 10 students consumed 16 or more drinks per week; (4) overall, more than one-third of the students preferred an alcohol-free environment and 87 percent preferred a drug-free environment; (5) more students at two-year institutions used cocaine than students at four-year institutions; (6) at both two- and four-year institutions, the heaviest drinkers obtained the lowest grades, especially among male students at four-year institutions; and (7) twice as many males as females reported binge drinking three or four times over a two-week period. Appendices include the survey questionnaire and validity and reliability measures. (GLR)

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Alcohol and Drugs on American College Campuses

Use, Consequences, and Perceptions of the Campus Environment

Volume 1: 1989–91

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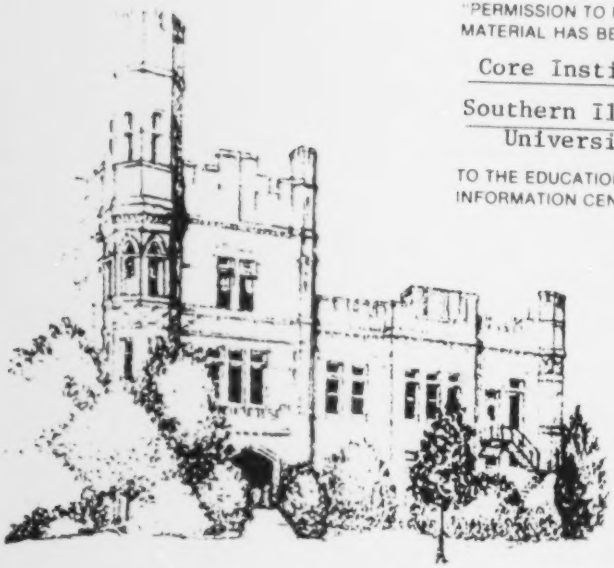

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ALCOHOL AND DRUGS ON AMERICAN COLLEGE CAMPUSES

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Use, Consequences, and Perceptions of the Campus Environment

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Volume 1: 1989–91

Cheryl A. Presley, Ph.D.
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The Core Institute
Student Health Program
Southern Illinois University – Carbondale
Carbondale, Illinois
January 1993

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1. Introduction

MISUSE OF ALCOHOL and other drugs by our nation's youth in the last 25 years has come to be considered a major societal problem. According to a summary of the 1974 and 1978 national surveys conducted for the National Institute on Alcohol Abuse and Alcoholism (Rachel et al., 1981), the prevalence of alcohol misuse involves as many as 1.1 million young people. In the 1986 Monitoring the Future study (Johnston, O'Malley, and Bachman, 1988), 80 percent of the college-age students surveyed reported having used alcohol within the last month.

Adolescent use of alcohol and other drugs has presented researchers and professionals with major conceptual and definitional problems. Construction of instruments in the field of adolescent alcohol assessment has traditionally relied on two fundamental assumptions: that adult models are applicable to the adolescent, and that psychological, sociological and alcoholism theories could describe and explain the behavior. Therefore, studies that have attempted to understand the nature and extent of adolescent drinking and drug use patterns raise questions, both methodologically and conceptually. Several national and regional studies have attempted to identify frequency, quantity, and type of drug use. To date, however, it has been difficult for individual campuses to assess their own usage patterns and to compare patterns with those of other institutions of higher education. Comparable and national "norm" data has been scant.

One of the major purposes of this monograph is to provide a clear picture of the nature, scope, and consequences of alcohol and other drug use on our nation's campuses. The drug and alcohol use patterns of today must be identified so that the related problems for our youth, their families, their community, and society may be addressed in an informed and systematic manner.

Development of the Core Survey

On October 26, 1986, Congress passed the Anti-Drug Abuse Act of 1986. The Drug-Free Schools and Communities Act of 1986 was contained within that legislation and included a set-aside of funds for higher education. The Fund for the Improvement of Postsecondary Education (FIPSE), a granting agency within the U.S. Department of Education, was given the responsibility to administer these funds.

In response to the Congressional mandate, FIPSE held its first competition for substance abuse prevention programs in higher education in May of 1987. Two-year grants began for selected institutions in September of that year. In October 1988, at the second annual meeting of the grantees, FIPSE staff made a request for interested individuals to volunteer to serve on a survey instrument selection committee. There was a pressing need to identify an instrument to assist grantees in gathering baseline and trend data regarding the alcohol and other drug use situations on their campuses and thereby satisfy the grant requirement of a pre/post assessment. This grantee need mirrored the national need.

The first meeting of the Instrument Selection Committee took place during the National Collegiate Drug Awareness Week Conference at Crystal City (Arlington, Virginia) in late January 1989. Individuals in the group represented two- and four-year public and private institutions. It was anticipated that the committee would meet and identify an existing instrument. Institutions needed to collect comparable data in order to make reasonable statements about the position of these institutions relative to national norms, and to make comparisons among institutions with similar characteristics (peer group institutions as defined by public versus private, rural versus urban, large versus small, East Coast versus West Coast, and the like).

The committee considered several existing instruments including the Monitoring the Future survey organized by the Institute for Social Research at the University of Michigan, the PRIDE instrument devel-

oped by the Parents Resource Institute for Drug Education based in Atlanta, the Wechsler and McFadden (1979) survey of 34 New England colleges, the Centers for Disease Control's Youth Risk Behavior Survey (YRBS), as well as questionnaires used by various individual campuses in the past. It quickly became apparent that existing instruments would not meet the needs of even those institutions that were represented on the Instrument Selection Committee, and would not address the Department of Education specifications to assess environmental change with regard to alcohol and other drug use. Accordingly, the Instrument Selection Committee developed a survey to assess the nature, scope, and consequences of students' drug and alcohol use, as well as students' awareness of relevant policies. The questions and response options on the new survey were designed to be compatible with the national databases noted above, in order to allow for valid comparisons.

The new instrument eventually came to be known as the Core Alcohol and Drug Survey because it was designed to be the centerpiece or "core" of potentially lengthier studies that institutions might conduct on their campuses. It was specifically designed to be inexpensive, easily administered, of high quality, statistically reliable and valid, and comparable to other surveys in the field. The content areas of the Core Survey (see next page) were developed on the basis of both theoretical assumptions regarding alcohol and drug use in the higher education setting and on previous research reported in the literature. Each item was carefully thought out, and in many cases, the Core Analysis Grantee Group had lengthy debates before arriving at an exact wording or formatting of a question.

During the summer of 1989, the Core Analysis Grantee Group met in Washington, D.C., to format the questions based on the above criteria. By late February 1990, the survey was ready for distribution and use by FIPSE grantees.

Content Areas of the Core Survey

A facsimile of the Core Survey is contained in an appendix to this monograph. (See Appendix A.) As shown, the Core Alcohol and Drug Survey covers the following topical areas: demographics (including year in school, age, ethnic origin, marital status, and gender); working and living arrangements, academics (including self-reported grade average, focus of coursework, and full- or part-time status); perceptions of campus substance abuse policies and their enforcement; average number of drinks consumed per week; frequency of binge drinking; patterns of use of alcohol, tobacco, marijuana, cocaine, amphetamines, sedatives, hallucinogens, opiates, inhalants, designer drugs, steroids, and other drugs; age of first use; perceptions of others' use; location of use; consequences of use; family history of substance abuse problems; and desire for an alcohol- and drug-free social environment. The Core Survey has been tested for reliability and validity; these results are documented in Appendix B.

Survey Methodology and Population

The Core Alcohol and Drug Survey is specifically designed for use with a higher education population. FIPSE grantees who decide to use the Core are provided with detailed survey methodology information which is contained in the Core Alcohol and Drug Survey Users' Manual, third edition. Survey users are strongly encouraged to use sampling techniques which will yield a representative sample of the population, and only institutions which used representative samples are included in the national aggregated analysis reported in this monograph.

The mechanisms by which the Core Survey is administered and scored is of interest in its own right. After individual campuses administer the survey, the questionnaires are sent to the University of Minnesota for machine scoring by an optical scanner. The University of Minnesota then converts the individual institution raw data into a computerized statistical report which describes the data in detail. Detailed report options that are available to Core users are outlined in

the Core Alcohol and Drug Survey Users' Manual. The individual institution can also receive the raw data on an IBM or Macintosh floppy disk for further analysis. Additionally, with permission of each participating institution, the raw data is simultaneously sent by computer tape to Southern Illinois University at Carbondale (SIUC) for inclusion in the aggregation and analysis of the national database. It is this aggregated data which forms the national database reported in this monograph.

This monograph presents, in detail, the findings of FIPSE Drug Prevention Program grantee institutions that were funded in the 1989–91 grant cycle and that used the Core Alcohol and Drug Survey. Of the 105 FIPSE-funded institutions that received grant awards in the fall of 1989, 96 used the Core Survey on their campuses. Of these 96 institutions, 78 used representative sampling techniques in survey administration in the academic year 1989–90 and 37 of the 78 institutions collected follow-up data in the academic year 1990–91. Information from the 78 institutions is presented in this report. Fifty-six of the institutions were four-year schools and 22 were two-year schools. (See Table 1-1.)

While only FIPSE-funded institutions initially funded in the fiscal year 1989 are represented in this report, we wish to point out that the student demographics are similar to those of American colleges and universities generally, as reported by the National Center for Educational Statistics (NCES) for the same time period.

Analyses Covered in this Report

All demographics of the respondents are reported both for two-year and four-year institutions as well as for all reporting institutions. We felt that possible differences in the student populations at two- and four-year institutions may be of concern to drug prevention program planners.

Prevalence data is presented for all drugs of concern on the survey, including tobacco, alcohol, marijuana, hallucinogens, amphetamines, sedatives, cocaine, opiates, inhalants, designer drugs, steroids, and

Table 1-1. Size of survey sample.

Item	Number of institutions	Size of sample (N)
Overall 1989–91 cohort group		
FIPSE-funded institutions	105	
Institutions which used Core survey	96	76,432
Non-representative sample[a]	18	17,807
Representative sample (1989–90)		
Two-year institutions	22	13,113
Four-year institutions	56	44,985
Consortia sample	N/A	527
Total	78	58,625
Regional analysis[b]		
West	18	14,991
North Central	23	20,191
South	20	9,091
Northeast	17	14,352
Pre- and post-test		
Pre-test sample (1989–90)	37	21,151
Post-test sample (1990–91)	37	15,018

[a] Data from institutions which did not use representative sampling techniques are not included in this report.

[b] For a definition of the regions named above, see Figure 5-1 (page 47).

"other drugs." These drugs were all included in the survey because drug use patterns change over time. The drug of choice today is not necessarily the drug of choice tomorrow. In addition to providing data for two- and four-year institutions separately, we have included male and female data and institution size differences where they are noteworthy.

Because program planning and policy formation and enforcement are integral parts of the educational environment, we report findings that deal with the social milieu: student perception of other students'

drug and alcohol use, student perception of the campus climate with regard to drug and alcohol policies, student preference for the availability of alcohol and other drugs, and family involvement with alcohol and other drugs.

A picture of the overall patterns of use would not be complete without an analysis of regional differences that may exist with regard to alcohol and drug use. Therefore, we have included a chapter that presents the results of responses to items on the Core Survey by geographic region.

There is a chapter that presents the pre/post data for the 37 institutions which collected follow-up data. It presents the changes that occurred in use, consequences, and policy awareness during the two-year funding period.

Because there is considerable national interest regarding legal versus illegal alcohol use, we have included a chapter that reports the variables of interest with respect to to the legal drinking age.

The number of students included in the analyses described in this monograph is listed in each particular table of findings. Where there is one item or variable of interest in a table, the N describes the number of students responding to that item on the Core Alcohol and Drug Survey. Where there is a set of items in the table, the N describes the maximum number of students responding to items in that set; individual items within the set may have slightly lower N's due to missing data (e.g., students omitting particular items on the questionnaire), but nevertheless the N's on those items will be close to the N listed.

Overview of Key Findings

- Students were three times as likely to report that their fathers had substance abuse problems as their mothers.
- Five times as many males as females consumed 21 or more drinks per week.
- Women reported higher grade averages than men and fewer negative academic consequences.

- For many drugs, the 18 to 25 year age group contained the highest percentage of reported first use.
- While over one-third of the students have driven under the influence, only 1.7 percent were arrested.
- One of every six students (17.4 percent) from two-year institutions reported drinking three or more times per week – as compared with one of every four students (25.3 percent) from four-year institutions.
- In four-year institutions, one in ten students consumed 16 or more drinks per week.
- Almost one third of the students at four-year institutions reported missing class due to substance use as compared with 21 percent of the students at two-year institutions.
- Overall, more than one-third of the students preferred an alcohol-free environment and 87 percent preferred a drug-free environment.
- Twice as many males as females reported binge drinking three or more times over a two week period.
- More students at two-year institutions used cocaine than students at four-year institutions.
- At both two-year and four-year institutions, the heaviest drinkers obtained the lowest grades. This finding was especially dramatic among male students at four-year institutions.

2. Overall Findings

THE RESULTS PRESENTED in this chapter represent the overall data collected from institutions using representative sampling techniques in administering the Core Alcohol and Drug Survey in the academic year 1989–90. The information presented in this chapter includes the overall demographic data on students who responded to the survey. It will also detail the findings by gender. Additionally, prevalence and frequency of drug and alcohol use, age of first use, and consequences of use are described.

Demographics

Table 2·1 provides a breakdown of age, gender, ethnic origin, marital status, residence, and student status (including year in college, grade average, focus of coursework, full- or part-time status, and employment). The sample is comparable to the National Center for Educational Statistics (NCES) data with regard to gender and ethnicity among U.S. college students for that year.

As aggregated information from all participating institutions, Table 2·1 provides a context for understanding this population of U.S. college students. Any single institution might find it difficult to compare itself with these overall averages. Other comparisons are available in subsequent chapters which deal with particular types of institutions.

Inasmuch as the national response group is considered to be comparable to the NCES data for gender, the differences in grade average for males and females is noteworthy. Women students reported higher grade averages. This corroborates a belief on the part of many that academic achievement by females is higher than that of males in college.

A contributing factor to this gender difference may be the fact that, as a result of drinking or drug use, males report a higher incidence of performing poorly on a test or important project, missing a class, and having a memory loss. (See Table 2·10, page 21.)

Table 2-1. Demographics of students in survey.

Item	Percent of students		
	Male (N=22,297)	Female (N=31,347)	Total (N=53,644)
Age			
18 and under	18.7	21.0	20.1
19 or 20	33.6	34.3	34.0
21 or 22	21.8	18.9	20.1
23 or 24	8.8	5.5	6.9
25 to 30	9.7	7.7	8.5
31 to 40	5.1	8.3	6.9
41 and over	2.4	4.2	3.5
Gender			
Male	–	–	41.5
Female	–	–	58.5
Ethnic origin			
American Indian	1.3	1.3	1.3
Hispanic	5.0	4.5	4.7
Asian/Pacific Islander	6.2	3.9	4.9
White (non-Hispanic)	81.3	83.5	82.6
Black (non-Hispanic)	4.5	5.6	5.1
Other	1.7	1.3	1.4
Marital status			
Single	88.2	80.8	83.9
Married	10.0	13.9	12.3
Separated	0.3	1.0	0.7
Divorced	1.4	3.8	2.8
Widowed	0.1	0.4	0.3
Residence			
Location			
On campus	39.9	40.1	40.0
Off campus	60.1	59.9	60.0

(continues)

NOTE: 58,625 students actually completed the Core Alcohol and Drug Survey, but only 53,644 indicated their gender. This table is presented by gender and therefore only includes those 53,644.

Table 2·1. *(cont.)* Demographics of students in survey.

Item	Percent of students		
	Male (N=22,297)	Female (N=31,347)	Total (N=53,644)
Residence *(cont.)*			
Living arrangement			
Residence hall	33.8	35.6	34.8
Approved housing	5.8	4.6	5.1
Fraternity or sorority	2.4	1.3	1.7
With roommate	31.5	32.7	32.2
Alone	8.0	7.3	7.6
With parent(s)	23.7	21.6	22.5
With spouse	9.1	13.0	11.4
With children	3.7	10.1	7.5
Other	4.0	3.4	3.7
Place of permanent residence			
In-state	78.2	82.2	80.6
USA, but out of state	18.2	16.3	17.1
Country other than USA	3.4	1.6	2.3
Student status			
Year in college			
Freshman	34.8	36.6	35.9
Sophomore	23.8	23.5	23.6
Junior	17.5	17.3	17.4
Senior	17.4	16.1	16.6
Graduate or professional	4.8	4.3	4.5
Not seeking a degree	1.7	2.2	2.0
Grade average			
A	17.6	23.7	21.2
B	53.3	55.4	54.5
C	28.0	20.2	23.5
D or F	1.0	0.6	0.8

(continues)

Table 2·1. *(cont.)* Demographics of students in survey.

Item	Percent of students		
	Male (N=22,297)	Female (N=31,347)	Total (N=53,644)
Student status *(cont.)*			
Focus of coursework			
Regular college courses	84.4	84.5	84.4
Basic skills	3.2	2.6	2.8
English as a second language	0.8	0.5	0.6
Other	11.7	12.5	12.2
Enrollment status			
Full-time (12 or more credits)	88.1	85.5	86.5
Part-time (1 to 11 credits)	11.9	14.5	13.5
Employment status			
Yes, full-time	13.4	11.9	12.5
Yes, part-time	44.8	47.7	46.5
No	41.8	40.4	41.0

Table 2·2. Frequency of alcohol use.

Frequency of alcohol use	Percent of students		
	Male (N=21,726)	Female (N=30,758)	Total (N=52,484)
Never	15.0	14.7	14.8
Once per year	5.0	8.2	6.9
6 times per year	8.8	14.2	12.0
Once per month	6.1	8.8	7.6
Twice per month	11.4	15.5	13.8
Once per week	23.2	22.0	22.5
3 times per week	22.8	14.0	17.6
5 times per week	6.0	2.2	3.8
Every day	1.6	0.4	0.9

Alcohol and Other Drug Use Among College Students

Prevalence: Alcohol

Alcohol is the most widely used drug on the college campus. Table 2·2 summarizes the frequency of use among male and female students in the past year. Eighty-five percent of all students reported drinking at least once in the year; 54 percent of males reported drinking at least once per week, whereas 39 percent of females did so.

Quantity of Alcohol Consumed

Students across the nation reported consuming an average of 5.0 drinks per week, with males consuming 7.5 drinks per week and females consuming 3.2 drinks per week. Table 2·3 provides more detail. More than twice as many males (28.3 percent) consume ten or more drinks per week than females (12.0 percent). Five times as many males (10.2 percent) as females (1.8 percent) consume 21 or more drinks per week.

Table 2·3. Percent of students reporting number of drinks consumed per week.

	Percent of students		
Number of drinks per week	Male (N=22,297)	Female (N=31,347)	Total (N=53,644)
None or one	42.8	58.9	52.2
2 to 5	20.8	23.0	22.0
6 to 9	8.2	6.3	7.0
10 to 15	13.2	8.2	10.2
16 to 20	4.9	2.0	3.2
21 or more	10.2	1.8	5.3

Table 2·4 reports striking differences in consumption by institutional size. Students at the smallest institutions (under 2,500 students) consume more drinks per week than students at other institutions while students at the largest institutions consume less.

In Table 2·5 the relationship between institutional size, student age, gender, and consumption is considered. For both men and women, non-traditional students (24 and older) consume far less than traditional-age students (under 24). The variation between institutional size and drinks per week is present largely among traditional-age male students; non-traditional age students tend to drink similar amounts regardless of campus size.

Binge Drinking

In the literature on alcohol use, binge drinking is operationally defined as the consumption of five or more drinks in one sitting. Table 2·6 reports the number of binge drinking episodes by students in the two weeks prior to survey administration. Overall, 41.8 percent of the students reported having binged "in the last two weeks." Note that 6.4 percent of the students reported six or more binge episodes in the last two weeks. This means a minimum of 30 drinks per two weeks per student and in all likelihood more. Fewer females binge drink, and

Table 2·4. Average number of drinks per week by size of institution.

	Average number of drinks per week		
Size of institution	Male (N=22,133)	Female (N=31,010)	Total (N=53,143)
Less than 2,500	10.2	4.3	6.6
2,500 to 4,999	7.5	2.7	4.7
5,000 to 9,999	7.5	3.1	4.9
10,000 to 19,999	6.9	3.0	4.7
20,000 or more	4.7	2.0	3.2

frequent binge drinking is more common among males than females. Twice as many males (26.6 percent) reported binge drinking three or more times over a two-week period as compared with females (12.8 percent).

Table 2·5. Average number of drinks per week by size of institution and student age.

	Average number of drinks per week			
	Traditional age (under 24)		Non-traditional (24 or older)	
Size of institution	Male (N=18,480)	Female (N=25,015)	Male (N=3,817)	Female (N=6,332)
Less than 2,500	11.2	4.9	3.2	1.5
2,500 to 4,999	8.3	3.2	3.4	1.1
5,000 to 9,999	8.2	3.5	4.0	1.5
10,000 to 19,999	7.7	3.4	2.9	1.6
20,000 or more	5.1	3.5	2.2	1.4

Table 2·6. Frequency of binge drinking episodes "in the last two weeks."

	Percent of students		
Number of episodes	Male (N=22,135)	Female (N=31,164)	Total (N=53,299)
None	48.6	65.0	58.2
One	13.7	13.6	13.7
Two	10.9	8.6	9.6
3 to 5	16.2	9.2	12.1
6 to 9	6.6	2.3	4.1
10 or more	3.8	1.3	2.3

Prevalence: Other Drugs

There is significant national concern over the use and consequences of drugs in our society. Table 2·7 presents the prevalence of drug use "in the last year" by male and female students. Alcohol, tobacco, and marijuana – in that order – are the most frequently used drugs. More males use tobacco and marijuana than women; males' frequency of use of these substances is also greater. As noted earlier, virtually the same percentage of males and females use alcohol, but high frequency use is more common among men.

Table 2·7. Percent of students indicating frequency of use of all drugs within the last year.
(N=52,518; males=21,726; females=30,792.)

	Frequency of use								
Substance	Never	1 per year	6 per year	1 per month	2 per month	1 per week	3 per week	5 per week	Daily
Tobacco									
Male	54.4	7.7	6.7	2.5	3.2	3.0	3.5	3.4	15.6
Female	64.4	6.6	5.3	1.8	2.3	1.7	2.3	2.7	12.9
Total	60.2	7.0	5.9	2.1	2.7	2.2	2.8	3.0	14.0
Alcohol									
Male	15.0	5.0	8.8	6.1	11.4	23.2	22.8	6.0	1.6
Female	14.7	8.2	14.2	8.8	15.5	22.0	14.0	2.2	0.4
Total	14.8	6.9	12.0	7.6	13.8	22.5	17.6	3.8	0.9
Marijuana									
Male	69.9	9.8	6.0	3.0	3.0	2.5	2.4	1.8	1.6
Female	76.3	9.9	5.5	2.3	2.4	1.5	1.0	0.6	0.5
Total	73.6	9.9	5.7	2.6	2.6	1.9	1.6	1.1	0.9
Cocaine									
Male	92.7	4.0	1.6	0.5	0.4	0.3	0.1	0.1	0.2
Female	96.2	2.2	0.8	0.3	0.2	0.1	0.1	–	–
Total	94.8	3.0	1.2	0.4	0.3	0.2	0.1	–	0.1

(continues)

Table 2·7. *(cont.)* Percent of students indicating frequency of use of all drugs within the last year.

Substance	Frequency of use								
	Never	1 per year	6 per year	1 per month	2 per month	1 per week	3 per week	5 per week	Daily
Amphetamines									
Male	94.2	2.7	1.3	0.6	0.5	0.3	0.2	0.1	0.2
Female	95.7	2.0	0.9	0.3	0.4	0.2	0.2	0.1	0.1
Total	95.1	2.3	1.1	0.4	0.4	0.2	0.2	0.1	0.1
Sedatives									
Male	97.3	1.1	0.6	0.3	0.3	0.2	0.1	–	0.2
Female	98.2	0.7	0.4	0.2	0.1	0.1	0.1	–	0.1
Total	97.8	0.9	0.5	0.2	0.2	0.1	0.1	–	0.1
Hallucinogens									
Male	92.4	4.1	1.9	0.6	0.4	0.2	0.1	–	0.2
Female	96.9	1.9	0.8	0.2	0.1	–	–	–	–
Total	95.1	2.8	1.2	0.3	0.2	0.1	0.1	–	0.1
Opiates									
Male	98.8	0.5	0.2	0.1	0.1	0.1	0.1	–	0.2
Female	99.7	0.2	–	–	–	–	–	–	–
Total	99.3	0.3	0.1	–	0.1	–	–	–	0.1
Inhalants									
Male	96.9	1.6	0.7	0.2	0.2	0.1	0.1	0.1	0.2
Female	98.7	0.8	0.3	0.1	0.1	–	–	–	–
Total	98.0	1.1	0.5	0.1	0.1	0.1	–	–	0.1
Designer drugs									
Male	97.0	1.7	0.5	0.2	0.2	0.1	0.1	0.1	0.2
Female	98.7	0.8	0.3	0.1	–	–	–	–	–
Total	98.0	1.2	0.4	0.1	0.1	0.1	–	–	0.1
Steroids									
Male	98.6	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.2
Female	99.8	0.1	–	–	–	–	–	–	0.1
Total	99.3	0.2	0.1	–	–	0.1	0.1	–	0.1
Other illegal drugs									
Male	97.7	1.0	0.5	0.1	0.2	0.1	0.1	0.1	0.3
Female	99.0	0.6	0.2	0.1	0.1	–	–	–	–
Total	98.5	0.7	0.3	0.1	0.1	0.1	–	–	0.1

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Sedatives, opiates, inhalants, designer drugs, steroids, and other illegal drugs are the least used drugs, with negligible use reported "in the last year." Cocaine, hallucinogens, and amphetamines were used by small percentages of students but the number is not negligible. More males used cocaine than females.

Table 2·8 summarizes the annual prevalence of the six most frequently used drugs.

Table 2·9 provides information about the age of first use of alcohol and other drugs. While historically the average age of *first use* is between the ages of 14 and 16 for many drugs, note that for cocaine, sedatives, hallucinogens, opiates, designer drugs, steroids, and other illegal drugs, the 18 to 25 year age range (in other words, the traditional college years) incurs the *highest* percentage of reported *first use*. The highest percent of reported first use for tobacco, alcohol, amphetamines, and inhalants occurs at younger ages, but even for those drugs there are significant numbers of students who begin using between the ages of 18 and 25.

Table 2·8. Prevalence of the most frequently used drugs "in the last year."
(N=52,518; males=21,726; females=30,792.)

	Percent of students using in the last year		
Substance	Male	Female	Total
Alcohol	85.0	85.3	85.2
Tobacco	45.6	35.6	39.8
Marijuana	30.1	23.7	26.4
Cocaine	7.3	3.8	5.2
Hallucinogens	7.6	3.1	4.9
Amphetamines	5.8	4.3	4.9

Table 2·9. Percent of students indicating age of first use for all drugs. (N=52,980; males=21,973; females=31,007.)

Substance	Age of first use							
	Less than 10	10–11	12–13	14–15	16–17	18–25	26 or older	Never
Tobacco								
Male	5.9	6.8	15.1	15.3	13.2	8.9	0.2	34.5
Female	2.5	4.3	12.2	13.6	12.9	8.7	0.3	45.6
Total	3.9	5.4	13.4	14.3	13.0	8.8	0.3	41.0
Alcohol								
Male	6.0	4.6	15.7	27.5	25.1	12.4	0.2	8.6
Female	3.7	2.7	12.4	27.1	27.3	17.1	0.6	9.1
Total	4.7	3.5	13.8	27.2	26.4	15.1	0.4	8.9
Marijuana								
Male	0.8	1.3	6.1	12.1	16.4	11.9	0.3	51.0
Female	0.3	0.5	4.2	10.8	15.0	11.5	0.7	57.0
Total	0.5	0.8	5.0	11.4	15.6	11.7	0.6	54.5
Cocaine								
Male	0.3	0.1	0.4	1.5	5.1	8.3	0.6	83.9
Female	–	–	0.2	1.1	3.6	5.0	0.7	89.4
Total	0.1	0.1	0.3	1.2	4.2	6.4	0.7	87.1
Amphetamines								
Male	0.3	0.2	1.1	3.6	6.0	5.3	0.1	83.4
Female	–	0.1	1.2	4.2	5.1	4.3	0.3	84.8
Total	0.1	0.1	1.1	4.0	5.5	4.7	0.2	84.2
Sedatives								
Male	0.3	0.1	0.6	1.7	2.5	2.5	0.1	92.2
Female	0.1	0.1	0.5	1.4	1.6	1.9	0.4	94.1
Total	0.1	0.1	0.5	1.6	2.0	2.2	0.3	93.3
Hallucinogens								
Male	0.2	0.1	0.4	2.0	5.2	6.7	0.1	85.2
Female	–	–	0.3	1.4	2.8	3.1	0.1	92.3
Total	0.1	0.1	0.3	1.6	3.8	4.6	0.1	89.4

(continues)

Table 2·9. (cont.) Percent of students indicating age of first use for all drugs.

Substance	Age of first use							
	Less than 10	10–11	12–13	14–15	16–17	18–25	26 or older	Never
Opiates								
Male	0.2	0.1	0.2	0.4	0.8	1.3	0.1	96.9
Female	–	–	–	0.2	0.3	0.4	0.1	99.0
Total	0.1	–	0.1	0.2	0.5	0.8	0.1	98.1
Inhalants								
Male	1.0	0.6	1.5	2.2	2.1	1.6	0.1	90.8
Female	0.3	0.3	0.8	1.1	1.0	0.7	–	95.7
Total	0.6	0.4	1.1	1.6	1.5	1.1	–	93.7
Designer drugs								
Male	0.2	–	0.1	0.3	1.4	3.1	0.1	94.7
Female	–	–	–	0.2	0.8	1.5	0.1	97.3
Total	0.1	–	0.1	0.3	1.0	2.2	0.1	96.2
Steroids								
Male	0.2	0.1	0.1	0.2	0.6	1.3	0.1	97.4
Female	–	–	–	0.1	0.1	0.1	0.1	99.6
Total	0.1	–	–	0.1	0.3	0.6	0.1	98.7
Other illegal drugs								
Male	1.0	0.1	0.4	0.8	1.2	1.9	0.1	94.4
Female	0.4	0.1	0.2	0.6	0.8	1.0	0.1	96.8
Total	0.7	0.1	0.3	0.7	1.0	1.4	0.1	95.8

Consequences

Table 2·10 lists the self-reported consequences of alcohol and other drug use during the previous year. Several findings are relevant to the academic environment. Almost one-quarter of the students reported that they performed poorly on a test or project, and almost one-third missed a class due to substance use. Over three-fifths of the students reported experiencing a hangover in the past year; 14.3 percent re-

ported ten or more. Also, 28.2 percent reported a memory loss or blackout, and 50.1 percent reported being sick or nauseated due to substance use within the last year.

As compared to female students, a greater proportion of male students reported experiencing each of the listed consequences as a result of substance use, with the exceptions of sexual abuse and suicide thoughts or attempts.

Nearly two-fifths of the students reported doing something under the influence of alcohol or other drugs that they later regretted; nearly one-third reported having a fight or argument, and 16.1 percent reported being physically hurt or injured due to substance use.

A substantial contrast exists between the 35.6 percent of students who have driven under the influence and the 1.7 percent who were arrested for drunk driving.

Table 2·10. Percent of students reporting consequences resulting from drug or alcohol use.
(N=51,971; males=21,458; females=30,513.)

	Frequency of consequence within last year					
Consequence	None	Once	Twice	3 to 5	6 to 9	10 or more
Had a hangover						
Male	33.1	12.1	10.4	16.5	8.1	19.8
Female	40.1	15.6	12.0	15.1	6.9	10.3
Total	37.2	14.2	11.3	15.7	7.4	14.3
Performed poorly on a test or project						
Male	72.3	10.8	6.9	6.3	1.8	1.9
Female	79.7	9.1	4.8	4.5	1.1	0.8
Total	76.6	9.8	5.7	5.2	1.4	1.2
Trouble with police or other campus authorities						
Male	80.1	10.9	14.5	3.1	0.7	0.7
Female	91.0	6.2	1.8	0.8	0.2	0.1
Total	86.5	8.1	2.9	1.7	0.4	0.3

(continues)

Table 2·10. *(cont.)* Percent of students reporting consequences resulting from drug or alcohol use.

	Frequency of consequence within last year					
Consequence	None	Once	Twice	3 to 5	6 to 9	10 or more
Damaged property, pulled fire alarm, etc.						
Male	85.7	6.2	6.2	2.9	0.8	1.2
Female	96.9	1.8	0.7	0.4	0.1	0.1
Total	92.3	3.6	1.7	1.4	0.4	0.5
Argument or fight						
Male	64.7	13.0	9.7	7.8	2.2	2.7
Female	68.1	11.9	8.6	7.3	2.0	2.1
Total	66.7	12.4	9.0	7.5	2.1	2.3
Nauseated or vomited						
Male	48.3	18.9	13.3	12.0	3.9	3.7
Female	51.1	19.9	12.9	10.5	3.1	2.5
Total	49.9	19.5	13.1	11.1	3.4	3.0
Driven a car while under the influence						
Male	56.9	12.3	8.2	9.5	4.1	9.1
Female	69.6	11.9	6.7	6.6	2.3	2.9
Total	64.4	12.0	7.3	7.8	3.1	5.4
Missed a class						
Male	64.5	8.1	8.1	9.5	4.2	5.5
Female	73.6	7.6	6.8	7.1	2.5	2.4
Total	69.8	7.8	7.4	8.1	3.2	3.7
Been criticized by someone I know						
Male	66.9	11.4	8.4	7.2	2.1	4.0
Female	73.8	11.3	6.9	4.9	1.3	1.7
Total	71.0	11.4	7.5	5.8	1.6	2.7
Thought I might have a drinking or other drug problem						
Male	83.9	6.4	3.4	2.6	1.0	2.7
Female	91.4	4.2	1.8	1.3	0.4	1.0
Total	88.3	5.1	2.4	1.9	0.6	1.7

(continues)

Table 2·10. *(cont.)* Percent of students reporting consequences resulting from drug or alcohol use.

	Frequency of consequence within last year					
Consequence	None	Once	Twice	3 to 5	6 to 9	10 or more
Had a memory loss						
Male	70.1	10.0	7.4	6.0	2.6	4.0
Female	73.1	10.8	7.2	5.1	1.9	1.9
Total	71.8	10.5	7.3	5.5	2.2	2.8
Done something I later regretted						
Male	58.5	14.9	10.9	8.8	2.8	4.2
Female	62.2	15.6	10.0	7.9	2.2	2.1
Total	60.7	15.3	10.3	8.2	2.5	3.0
Arrested for DWI, DUI						
Male	97.0	2.2	0.3	0.2	0.1	0.3
Female	99.3	0.6	0.1	–	–	–
Total	98.3	1.2	0.2	0.1	–	0.1
Sexual advantage						
Male	85.3	6.0	3.7	2.5	0.8	1.7
Female	84.8	8.5	3.7	2.0	0.5	0.5
Total	85.0	7.5	3.7	2.2	0.6	1.0
Tried unsuccessfully to stop using						
Male	92.2	3.2	1.8	1.3	0.4	1.1
Female	95.7	1.9	1.1	0.7	0.2	0.4
Total	94.3	2.4	1.4	1.0	0.3	0.7
Thought about or tried to commit suicide						
Male	94.6	2.6	1.2	0.7	0.3	0.7
Female	94.4	3.1	1.2	0.8	0.2	0.4
Total	94.5	2.9	1.2	0.7	0.2	0.5
Been hurt or injured						
Male	81.1	9.3	4.8	2.9	0.7	1.1
Female	85.8	7.5	3.7	2.0	0.5	0.5
Total	83.9	8.2	4.2	2.4	0.6	0.8

Alcohol Use and Academic Performance

Table 2-11 describes the relationship between the average number of drinks consumed per week and self-reported grade average. As can be seen, the heaviest drinkers obtained the lowest grades. This finding is true for both men and women, but is especially dramatic for men.

Table 2-11. Average number of drinks per week, listed by grade average.

Grade average	Males (N=21,112)	Females (N=29,595)	Overall (N=50,707)
A	5.4	2.3	3.3
B	7.4	3.4	5.0
C	9.2	4.1	6.6
D or F	14.6	5.2	10.1

3. Two-Year Institutions

THE RESULTS PRESENTED in this chapter represent data collected using the Core Alcohol and Drug Survey by two-year FIPSE grantee institutions. Of the 78 institutions that reported using representative sampling techniques to collect their data, 22 were two-year institutions, providing data on 13,113 students. Demographics, prevalence and frequency of drug and alcohol use, age of first use, and consequences of use are described.

Demographics

Table 3.1 provides a breakdown of age, gender, ethnic origin, marital status, residence, and student status (including year in college, grade average, focus of coursework, full- or part-time status, and employment) of survey participants enrolled in two-year institutions.

Three-fifths (62.2 percent) of the students surveyed from two-year institutions were of traditional college age (under 24 years old), as compared with 85.3 percent at four-year institutions. (See Chapter 4.) Two-thirds (67.3 percent) of the students surveyed from two-year institutions were full-time students in contrast to 91.8 percent of students at four-year institutions.

Nearly half (43.8 percent) of the students at two-year institutions lived with their parents, compared with 16.0 percent at four-year institutions; 20.2 percent lived with a spouse, as compared with 8.9 percent of four-year students.

Table 3·1. Demographics of two-year college students. (N=13,113.)

Item	Percent of students
Age	
18 and under	15.0
19 or 20	31.6
21 or 22	12.6
23 or 24	6.3
25 to 30	13.4
31 to 40	13.4
41 and over	7.7
Gender	
Male	41.4
Female	58.6
Ethnic origin	
American Indian	2.0
Hispanic	11.9
Asian/Pacific Islander	7.6
White (non-Hispanic)	68.9
Black (non-Hispanic)	6.9
Other	2.8
Marital status	
Single	69.7
Married	22.0
Separated	1.7
Divorced	6.0
Widowed	0.6
Residence	
Location	
On campus	6.9
Off campus	93.1

(continues)

Table 3·1. *(cont.)* Demographics of two-year college students.

Item	Percent of students
Residence *(cont.)*	
Living arrangement	
Residence hall	2.1
Approved housing	1.8
Fraternity or sorority	0.2
With roommate	14.2
Alone	7.0
With parent(s)	43.8
With spouse	20.2
With children	14.9
Other	5.6
Place of permanent residence	
In-state	95.9
USA, but out of state	2.4
Country other than USA	1.7
Student status	
Year in college	
Freshman	39.7
Sophomore	36.0
Junior	7.9
Senior	5.8
Graduate or professional	4.0
Not seeking a degree	6.7
Grade average	
A	19.4
B	53.7
C	26.2
D or F	0.8
Focus of coursework	
Regular college courses	78.1
Basic skills	6.4
English as a second languge	1.5
Other	14.0

(continues)

Table 3·1. *(cont.)* Demographics of two-year college students.

Item	Percent of students
Student status *(cont.)*	
Enrollment status	
Full-time (12 or more credits)	67.3
Part-time (1 to 11 credits)	32.7
Employment status	
Yes, full-time	22.9
Yes, part-time	46.7
No	30.4

Alcohol and Other Drug Use Among Two-Year College Students

Prevalence: Alcohol

Alcohol is the most widely used drug on the college campus for both two- and four-year institutions. Table 3·2 summarizes the frequency of use at two-year institutions. One of every six students (17.4 percent) from two-year institutions reported drinking three or more times per week, compared to 25.3 percent at four-year institutions. This indicates that drinking is not confined to weekends. Over three-fourths (77.4 percent) of the students reported using alcohol in the last year, compared with 88.4 percent at four-year institutions.

Quantity of Alcohol Consumed

Students in two-year institutions across the nation reported consuming an average of 3.1 drinks per week. Table 3·3 provides more detail. 4.4 percent of the students drink 16 or more drinks per week, on average. The average number of drinks per week for non-traditional students (24 years old and over) is 2.1, and for traditional age students (less than 24 years old) is 3.6. There is less of a relationship between age and average number of drinks per week among students at two-year institutions than among students at four-year institutions. (See page 40.)

Quantity of Alcohol Consumed and Size of Institution

Table 3·4 displays the relationship between average number of drinks per week and the size of the institution, as well as differences between traditional and non-traditional students attending two-year institutions of varying sizes. There is no pattern in the relationship of institutional size and number of drinks per week. This observation is true for both traditional-age students (under 24) and non-traditional students (24 and older).

Table 3·2. Frequency of alcohol use by students in two-year institutions. (N=11,674.)

Frequency of alcohol use	Percent of students
Never	22.6
Once per year	9.1
6 times per year	14.3
Once per month	8.0
Twice per month	11.9
Once per week	16.7
3 times per week	12.5
5 times per week	3.7
Every day	1.2

Table 3·3. Number of drinks per week for students in two-year institutions. (N=12,039.)

Number of drinks per week	Percent of students
None or one	65.6
2 to 5	18.3
6 to 9	5.1
10 to 15	6.6
16 to 20	1.7
21 or more	2.7

Binge Drinking

In the literature on alcohol use, binge drinking is operationally defined as the consumption of five or more drinks at one sitting. Overall, 30.3 percent of the students in two-year institutions reported having binged "in the last two weeks." Table 3.5 reports the number of binge drinking episodes by students in the two weeks prior to survey administration.

Table 3.4. Average number of drinks per week by size of institution and student age.

	Average number of drinks per week		
Size of institution	Traditional age (under 24) (N=8,598)	Non-traditional (24 or older) (N=4,515)	Total (N=13,113)
Less than 2,500	4.2	1.9	3.2
2,500 to 4,999	3.3	1.7	2.7
5,000 to 9,999	4.9	2.4	4.2
10,000 to 19,999	3.3	2.2	2.9
20,000 or more	2.7	2.4	2.6

Table 3.5. Gender and frequency of binge drinking episodes "in the last two weeks."

	Percent of students		
Number of episodes	Male (N=4,947)	Female (N=7,012)	Total (N=11,959)
None	58.8	77.4	69.7
One	12.3	10.4	11.2
Two	10.1	5.2	7.2
3 to 5	11.6	5.0	7.8
6 to 9	4.1	1.0	2.3
10 or more	3.2	0.9	1.8

Note that 4.1 percent of the students reported more than five binges in the last two weeks. This means a minimum of 30 drinks per two weeks per student and in all likelihood more. The percentage of students at two-year institutions who reported binge drinking in the past two-weeks was 30.3 percent as opposed to 45.0 percent at four-year institutions.

Many times averages hide important differences between groups. This is true with respect to binge drinking and gender, and this has important ramifications for counseling and prevention programming. Table 3·5 illustrates this in more detail.

Fewer females binge drink, and frequent binge drinking is more common among males than females. Almost three times as many males (18.9 percent) reported binge drinking three or more times over a two-week period than females (6.9 percent).

Prevalence: Other Drugs

There is significant national concern over the use and consequences of drugs in our society. Table 3·6 presents the prevalence of drug use "in the last year" by students in two-year institutions of higher education. Opiates, inhalants, designer drugs, steroids, and other illegal drugs are the least used drugs, with negligible use reported "in the last year." Sedatives, hallucinogens, and amphetamines were used by small percentages of students but the number is not negligible. Twice as many students drink as use tobacco; however, daily use of tobacco is 15 times as high as alcohol. Note that the percentage of students reporting cocaine use is higher among students at two-year institutions than among students at four-year institutions. (See page 43.)

Table 3·7 summarizes the annual prevalence of the six most frequently used drugs. Note that the order of the frequency of use of these drugs is slightly different among students at two-year institutions than it is among students at four-year institutions. (See page 44.) Specifically, hallucinogens and cocaine have switched places in the list.

Table 3·6. Percent of students reporting frequency of drug use in the last year. (N=11,679.)

	Frequency of use								
Substance	Never	1 per year	6 per year	1 per month	2 per month	1 per week	3 per week	5 per week	Daily
Tobacco	64.0	4.9	3.7	1.4	1.9	1.5	2.3	2.6	17.6
Alcohol	22.6	9.1	14.3	8.0	11.9	16.7	12.5	3.7	1.2
Marijuana	76.8	8.3	4.4	2.4	2.2	2.0	1.6	1.2	1.3
Cocaine	92.7	3.8	1.6	0.6	0.4	0.4	0.2	0.1	0.1
Amphetamines	94.5	2.6	1.1	0.4	0.5	0.3	0.3	0.1	0.1
Sedatives	97.2	1.2	0.5	0.3	0.3	0.2	0.1	0.1	0.2
Hallucinogens	95.8	2.5	0.9	0.3	0.2	0.1	0.1	–	0.1
Opiates	99.4	0.3	0.1	–	0.1	–	0.1	–	0.1
Inhalants	98.5	0.8	0.3	0.1	0.1	0.1	–	–	0.1
Designer drugs	98.0	1.0	0.5	0.1	0.1	0.1	0.1	–	0.1
Steroids	99.2	0.3	0.1	–	0.1	0.1	0.1	0.1	0.2
Other drugs	98.6	0.6	0.3	0.1	0.1	0.1	–	–	0.1

Table 3·7. Prevalence of the most frequently used drugs "in the last year." (N=11,679.)

Drug	Percent of students using in the last year
Alcohol	77.4
Tobacco	36.0
Marijuana	23.2
Cocaine	7.3
Amphetamines	5.5
Hallucinogens	4.2

Table 3·8 summarizes the ages at which students reported starting the use of each drug. While historically the average age of *first use* is between the ages of 14 and 16 for many drugs, note that for cocaine, sedatives, opiates, designer drugs, steroids, and other illegal drugs, the 18 to 25 year age range incurs the *highest* percentage of reported *first use*. The highest percent of reported first use for tobacco, alcohol, marijuana, hallucinogens, and inhalants occurs at younger ages, but even for those drugs there are significant numbers of students who began using between the ages of 18 and 25.

Table 3·8. Percent of students' self-reported age of first use of drugs. (N=11,837.)

	Age of first use							
Substance	Less than 10	10–11	12–13	14–15	16–17	18–25	26 or older	Never
Tobacco	4.3	6.1	13.5	14.5	11.6	8.5	0.7	40.8
Alcohol	4.7	3.6	12.8	24.3	23.9	17.0	1.2	12.5
Marijuana	0.9	1.4	7.0	12.8	14.9	9.8	1.3	51.9
Cocaine	0.1	0.1	0.4	2.2	6.5	9.1	1.5	80.1
Amphetamines	0.2	0.1	1.7	5.4	7.2	6.7	0.5	78.3
Sedatives	0.1	0.1	0.9	2.5	3.2	3.4	0.6	89.2
Hallucinogens	0.1	0.1	0.6	2.6	5.0	4.9	0.2	86.5
Opiates	0.1	–	0.1	0.3	0.8	1.2	0.2	97.3
Inhalants	0.5	0.4	1.3	1.6	1.4	0.9	0.1	93.8
Designer drugs	0.1	–	0.1	0.4	1.1	2.4	0.2	95.7
Steroids	0.1	–	0.1	0.1	0.4	0.8	0.2	98.4
Other drugs	0.7	0.1	0.5	0.9	1.2	1.6	0.3	94.8

Consequences

Table 3.9 lists the self-reported consequences of alcohol and other drug use during the last year. Several findings are relevant to the academic environment. Almost one-fifth of the students reported that they performed poorly on a test or important project due to substance use and missed a class due to substance use. Over half of the students reported experiencing a hangover within the past year; 9.7 percent reported ten or more. Also, 19.2 percent reported memory loss or blackouts, and 39.8 percent reported being sick or nauseated.

Note that 30.3 percent of the students reported activities under the influence of alcohol or other drugs that they later regretted, 26.7 percent had a fight or argument, and 11.7 percent reported being physically hurt or injured as a consequence of substance use. A substantial contrast exists between the 33.4 percent of students who had driven under the influence and the 2.1 percent who had been arrested for drunk driving.

The percentage of students experiencing one or more episodes of the consequences listed in Table 3.9 is greater among students at four-year institutions than among students at two-year institutions except for arrests for drunk driving, unsuccessful attempts to stop using, and thoughts about or attempts to commit suicide. (See Chapter 4.)

Table 3·9. Percent of students reporting consequences of alcohol and other drug use. (N=11,526.)

	Frequency of consequence within last year					
Consequence	None	Once	Twice	3 to 5	6 to 9	10 or more
Hangover	46.8	15.2	10.9	12.6	4.8	9.7
Poor test score	80.6	7.9	4.7	4.3	1.2	1.3
Trouble with police, etc.	91.3	5.3	1.8	0.9	0.2	0.4
Property damage, fire alarm	94.1	2.7	1.3	1.1	0.2	0.6
Argument or fight	73.3	10.5	7.0	5.3	1.7	2.3
Nauseated or vomited	60.2	16.9	10.3	7.7	2.4	2.5
Driven while intoxicated	66.6	11.1	6.8	6.9	2.7	6.0
Missed a class	79.2	5.9	5.7	5.3	2.0	2.0
Been criticized	77.4	9.1	5.5	4.2	1.2	2.6
Thought I had a problem	89.0	4.5	2.1	1.6	0.6	2.2
Had a memory loss	80.8	7.8	5.0	3.1	1.2	2.1
Later regretted action	69.7	12.8	7.7	5.6	1.5	2.7
Arrested for DWI, DUI	97.9	1.6	0.2	0.1	–	0.2
Sexual advantage	88.0	5.4	2.9	1.9	0.5	1.2
Tried, failed to stop	93.5	2.7	1.5	1.0	0.3	1.0
Suicide attempt, thoughts	93.7	3.1	1.4	1.0	0.2	0.6
Been hurt, injured	88.3	5.9	3.1	1.6	0.4	0.7

Alcohol Use and Academic Performance

Table 3·10 describes the relationship between the average number of drinks consumed per week and self-reported grade average. As can be seen, the heaviest drinkers obtained the lowest grades, although this finding is not as dramatic as for students at four-year institutions. (See page 46.)

Table 3·10. Average number of drinks per week, listed by grade average. (N=11,929.)

Grade average	Average number of drinks per week
A	2.5
B	3.1
C	3.8
D or F	8.3

4. Four-Year Institutions

THE RESULTS PRESENTED in this chapter represent data collected using the Core Alcohol and Drug Survey by four-year FIPSE grantee institutions. Of the 78 institutions that reported using representative sampling techniques to collect their data, 56 were four-year institutions, providing data on 44,985 students. Demographics, prevalence and frequency of drug and alcohol use, age of first use, and consequences of use are described.

Demographics

Table 4·1 provides a breakdown of age, gender, ethnic origin, marital status, residence, and student status (including year in college, grade average, focus of coursework, full- or part-time status, and employment) of survey respondents enrolled in four-year institutions.

The sample for four-year institutions is comparable to the National Center for Educational Statistics (NCES) data with regard to gender and ethnicity. Four-fifths (83.6 percent) of the students in this sample were traditional age students (under 24 years old), and most were enrolled full-time (12 or more hours). Approximately half lived on campus.

Table 4·1. Demographics of four-year college students. (N=44,985.)

Item	Percent of students
Age	
18 and under	23.2
19 or 20	33.5
21 or 22	21.6
23 or 24	7.0
25 to 30	7.3
31 to 40	5.2
41 and over	2.3

(continues)

Table 4·1. *(cont.)* Demographics of four-year college students.

Item	Percent of students
Gender	
Male	41.7
Female	58.3
Ethnic origin	
American Indian	1.1
Hispanic	2.6
Asian/Pacific Islander	4.1
White (non-Hispanic)	86.4
Black (non-Hispanic)	4.7
Other	1.1
Marital status	
Single	87.4
Married	9.9
Separated	0.5
Divorced	2.0
Widowed	0.2
Residence	
Location	
On campus	48.9
Off campus	51.1
Living arrangement	
Residence hall	42.7
Approved housing	5.8
Fraternity or sorority	2.1
With roommate	35.9
Alone	7.6
With parent(s)	16.0
With spouse	8.9
With children	5.4
Other	3.1

(continues)

Table 4·1. *(cont.)* Demographics of four-year college students.

Item	Percent of students
Residence *(cont.)*	
Place of permanent residence	
In-state	76.2
USA, but out of state	21.3
Country other than USA	2.6
Student status	
Year in college	
Freshman	34.3
Sophomore	19.9
Junior	20.1
Senior	20.1
Graduate or professional	5.0
Not seeking a degree	0.6
Grade average	
A	21.8
B	54.8
C	22.6
D or F	0.8
Focus of coursework	
Regular college courses	86.1
Basic skills	1.8
English as a second language	0.3
Other	11.8
Enrollment status	
Full-time (12 or more credits)	91.8
Part-time (1 to 11 credits)	8.2
Employment status	
Yes, full-time	9.9
Yes, part-time	46.5
No	43.6

Alcohol and Other Drug Use Among Four-Year College Students

Prevalence: Alcohol

Alcohol is the most widely used drug on the college campus for both two- and four-year institutions. Table 4·2 summarizes the frequency of use at four-year institutions. One-fourth (25.3 percent) of the students from four-year institutions reported drinking three or more times per week, while 88.4 percent of the students reported using alcohol in the last year.

Quantity of Alcohol Consumed

Students in four-year institutions across the nation reported consuming an average of 5.4 drinks per week. Table 4·3 provides more detail. Almost one of every ten (9.0 percent) of the students consumed 16 or more drinks per week, on average. The average number of drinks per week by students at four-year institutions for non-traditional age students (24 years old and over) was 2.3, and for traditional age students (less than 24 years old) was 6.0. The relationship between age and average number of drinks consumed per week thus appears quite strong.

Table 4·2. Frequency of alcohol use by students in four-year institutions. (N=40,314.)

Frequency of alcohol use	Percent of students
Never	11.6
Once per year	5.8
6 times per year	10.9
Once per month	7.4
Twice per month	14.5
Once per week	24.5
3 times per week	20.2
5 times per week	4.2
Every day	0.9

Quantity of Alcohol Consumed and Size of Institution

Table 4·4 presents the relationship between average number of drinks per week and size of the institution, including differences between traditional-aged and non-traditional students attending four-year institutions of varying sizes. Alcohol consumption by non-traditional students is much lower than that of traditional students, and their drinking does not vary much by institutional size. For traditional age students, however, the average number of drinks con-

Table 4·3. Number of drinks per week for students in four-year institutions. (N=44,985.)

Number of drinks per week	Percent of students
None or one	49.6
2 to 5	22.7
6 to 9	7.4
10 to 15	10.9
16 to 20	3.6
21 or more	5.8

Table 4·4. Average number of drinks per week by size of institution and student age.

	Average number of drinks per week		
Size of institution	Traditional age (under 24) (N=38,337)	Non-traditional (24 or older) (N=6,648)	Total (N=44,985)
Less than 2,500	7.5	2.1	6.9
2,500 to 4,999	5.8	2.0	5.2
5,000 to 9,999	5.4	2.5	5.0
10,000 to 19,999	5.4	2.1	5.0
20,000 or more	4.3	2.5	3.8

sumed per week varies widely by institutional size. Students at institutions under 2,500 consumed more drinks per week than students at larger campuses. Consumption at the largest institutions was lowest.

Binge Drinking

In the literature on alcohol use, binge drinking is operationally defined as the consumption of five or more drinks at one sitting. Overall, 45.0 percent of the students at four-year institutions reported having binged "in the last two weeks." Table 4·5 provides more detail. Note that 7.1 percent of the students reported more than five binge episodes in the last two weeks. This means a minimum of 30 drinks per two weeks per student and in all likelihood more. Heavy drinking is frequently associated in the literature with residence hall damage, sexual assaults, fights, drunk driving, and lower grade averages.

As shown in Table 4·5, fewer females reported binge drinking. Frequent binge drinking is more common among males than females; twice as many males (28.9 percent) reported binge drinking three or more times over a two-week period than females (14.4 percent).

Table 4·5. Gender and frequency of binge drinking episodes "in the last two weeks."

	Percent of students		
Number of episodes	Male (N=17,025)	Female (N=23,817)	Total (N=40,842)
None	45.8	61.5	55.0
One	14.2	14.6	14.4
Two	11.2	9.5	10.2
3 to 5	17.5	10.3	13.3
6 to 9	7.4	2.7	4.6
10 or more	4.0	1.4	2.5

Prevalence: Other Drugs

There is significant national concern over the use and consequences of drugs in our society. Table 4·6 presents the prevalence of drug use "in the last year" by students at four-year institutions of higher education. Sedatives, opiates, inhalants, designer drugs, steroids, and other illegal drugs are the least used drugs, with negligible use reported "in the last year." Cocaine, hallucinogens, and amphetamines were used by small percentages of students but the number is not negligible. Approximately five percent reported using each of these drugs within the last year. In terms of annual prevalence, twice as many students drink as use tobacco, but daily use of tobacco is 13 times as high as alcohol.

Table 4·6. Percent of students indicating frequency of drug use in the last year. (N=40,314.)

	Frequency of use								
Substance	Never	1 per year	6 per year	1 per month	2 per month	1 per week	3 per week	5 per week	Daily
Tobacco	59.1	7.7	6.5	2.3	2.9	2.4	2.9	3.1	13.1
Alcohol	12.6	6.3	11.3	7.6	14.4	24.1	19.0	3.8	0.9
Marijuana	72.7	10.3	6.1	2.7	2.8	1.9	1.6	1.0	0.9
Cocaine	95.3	2.8	1.0	0.3	0.2	0.1	0.1	–	0.1
Amphetamines	95.2	2.2	1.1	0.4	0.4	0.2	0.2	0.1	0.1
Sedatives	98.0	0.8	0.5	0.2	0.2	0.1	0.1	–	0.1
Hallucinogens	94.9	2.9	1.3	0.4	0.3	0.1	0.1	–	0.1
Opiates	99.3	0.3	0.1	0.1	0.1	–	–	–	0.1
Inhalants	97.8	1.2	0.5	0.1	0.1	0.1	–	–	0.1
Designer drugs	98.0	1.2	0.4	0.1	0.1	0.1	–	–	0.1
Steroids	99.4	0.2	0.1	–	–	0.1	0.1	–	0.1
Other drugs	98.4	0.8	0.3	0.1	0.1	–	–	–	0.1

Table 4·7 summarizes annual prevalence of the six most frequently used drugs.

Table 4·8 summarizes the ages at which students reported starting the use of each drug. While historically the average age of *first use* is between the ages of 14 and 16 for many drugs, note that for cocaine, sedatives, opiates, hallucinogens, designer drugs, steroids, and other illegal drugs, the 18 to 25 age range incurs the *highest* percentage of reported *first use*. The highest percent of reported first use for tobacco, alcohol, amphetamines, and inhalants occurs at younger ages, but even for those drugs note that there are significant numbers of students who began using between the ages of 18 and 25.

Consequences

Table 4·9 lists the self-reported consequences of alcohol and other drug use during the last year. Several findings are relevant to the academic environment. Almost one-quarter of the students reported performing poorly on a test or project, and almost one-third reported missing a class due to substance use. Also, 65.5 percent of the students reported experiencing a hangover within the past year, with 15.6 percent reporting ten or more; 30.6 percent reported a memory loss or blackout due to substance use; and 52.9 percent reported being sick or nauseated "in the last year."

Table 4·7. Prevalence of the most frequently used drugs "in the last year." (N=40,314.)

Drug	Percent of students using in the last year
Alcohol	87.4
Tobacco	40.9
Marijuana	27.3
Hallucinogens	5.1
Amphetamines	4.8
Cocaine	4.7

Table 4·8. Percent of students' self-reported age of first use of drugs. (N=40,054.)

	Age of first use							
Substance	Less than 10	10–11	12–13	14–15	16–17	18–25	26 or older	Never
Tobacco	3.8	5.2	13.4	14.3	13.4	8.8	0.2	41.0
Alcohol	4.7	3.5	14.1	28.1	27.1	14.5	0.2	7.8
Marijuana	0.4	0.6	4.5	11.0	15.8	12.2	0.4	55.2
Cocaine	0.1	–	0.2	0.9	3.6	5.6	0.4	89.1
Amphetamines	0.1	0.1	1.0	3.5	5.0	4.2	0.1	85.9
Sedatives	0.2	0.1	0.4	1.3	1.6	1.9	0.2	94.4
Hallucinogens	0.1	0.1	0.2	1.3	3.5	4.5	0.1	90.1
Opiates	0.1	–	0.1	0.2	0.5	0.7	–	98.3
Inhalants	0.7	0.4	1.0	1.6	1.5	1.1	–	93.7
Designer drugs	0.1	–	0.1	0.2	1.0	2.1	0.1	96.3
Steroids	0.1	–	–	0.1	0.3	0.6	0.1	98.8
Other drugs	0.6	0.1	0.2	0.6	0.9	1.3	0.1	96.1

Note that 41.9 percent of the students reported activities under the influence of alcohol or other drugs that they later regretted, 35.1 percent had a fight or argument, and 17.4 percent reported being physically hurt or injured as a consequence of substance use.

A substantial contrast exists between the 36.2 percent of students who have driven under the influence and the 1.5 percent who have been arrested for drunk driving.

Alcohol Use and Academic Performance

Table 4·10 describes the relationship between the average number of drinks consumed per week and grade average. As can be seen, the heaviest drinkers obtained the lowest grades.

Table 4·9. Percent of students indicating consequences of alcohol and other drug use. (N=39,947.)

Consequence	Frequency of consequence within last year					
	None	Once	Twice	3 to 5	6 to 9	10 or more
Hangover	34.5	13.9	11.4	16.5	8.1	15.6
Poor test score	75.5	10.3	6.0	5.5	1.5	1.2
Trouble with police, etc.	85.2	8.9	3.2	2.0	0.4	0.3
Property damage, fire alarm	91.7	3.9	1.8	1.6	0.4	0.5
Argument or fight	64.9	12.9	9.6	8.2	2.2	2.3
Nauseated or vomited	47.1	20.2	13.8	12.0	3.7	3.1
Driven while intoxicated	63.8	12.3	7.5	8.0	3.2	5.3
Missed a class	67.2	8.4	7.8	8.8	3.5	4.2
Been criticized	69.2	12.0	8.1	6.3	1.7	2.7
Thought I had a problem	88.1	5.3	2.6	1.9	0.7	1.5
Had a memory loss	69.4	11.2	7.9	6.2	2.4	2.9
Later regretted action	58.1	16.0	11.1	9.0	2.8	3.1
Arrested for DWI, DUI	98.5	1.1	0.1	0.1	–	0.1
Sexual advantage	84.2	8.1	3.9	2.3	0.7	0.9
Tried, failed to stop	94.5	2.3	1.4	0.9	0.3	0.6
Suicide attempt, thoughts	94.7	2.8	1.1	0.7	0.2	0.5
Been hurt, injured	82.6	8.9	4.5	2.6	0.6	0.8

Table 4·10. Average number of drinks per week, listed by grade average. (N=41,845.)

Grade average	Average number of drinks per week
A	3.6
B	5.5
C	7.6
D or F	10.6

5. Regional

THIS CHAPTER WILL PRESENT the findings from the Core Alcohol and Drug Survey by geographic area. For the purpose of this report, the country has been divided into four regions. (See Figure 5·1.) These are the same divisions that are used by the United States Census Bureau and the Monitoring the Future study. The data for this chapter include all 78 two- and four-year institutions which administered the Core Survey in academic year 1989–90 and which used representative sampling techniques.

Figure 5·1. Definitions of regions for regional analyses.

Table 5·1. Percent of students reporting frequency of alcohol use in the last year by region. (N=56,244.)

	Frequency of use								
Substance	Never	1 per year	6 per year	1 per month	2 per month	1 per week	3 per week	5 per week	Daily
West	23.3	8.5	13.6	8.3	12.9	17.7	11.7	3.1	1.0
North Central	11.4	6.1	11.8	7.8	15.2	24.9	18.6	3.4	0.7
South	19.3	8.8	12.9	7.8	12.7	19.3	14.6	3.6	1.0
Northeast	8.4	5.2	9.9	6.6	13.5	25.9	24.2	5.1	1.2

Table 5·2. Average number of drinks per week by region. (N=58,098.)

Region	Average number of drinks per week
West	2.9
North Central	5.3
South	3.9
Northeast	7.1

Table 5·3. Percent of students reporting frequency of binge drinking episodes "in the last two weeks" by region. (N=57,113.)

	Number of episodes					
Region	None	One	Two	3 to 5	6 to 9	10 or more
West	70.8	11.5	7.0	7.2	1.8	1.7
North Central	53.8	15.2	10.6	13.6	4.7	2.1
South	65.1	11.9	8.0	9.3	3.3	2.4
Northeast	47.1	14.8	11.9	16.6	6.2	3.4

Alcohol and Other Drug Use by Region

Prevalence: Alcohol

Data in Table 5·1 reporting the use of alcohol reveal noteworthy regional contrasts. For instance, the highest percent of non-users *in the last year* was found in the West (23.3 percent); the Northeast had the lowest percent of non-users (8.4 percent). More than half of students in the Northeast (56.4 percent) consume alcohol at least once a week as contrasted with 33.5 percent of students in the West.

Quantity of Alcohol Consumed

Table 5·2 reports the average number of drinks per week that students in each of the regions reported consuming. In terms of quantity of alcohol consumed, the Northeast shows a consumption level more than double that of the West. The North Central region had the second highest consumption level and the South ranked third.

Binge Drinking

In the literature on alcohol use, binge drinking is operationally defined as the consumption of five or more drinks in one sitting. Table 5·3 reports the frequency of binge drinking episodes "in the last two weeks" among students in each region. Consistent with the findings on drinking frequency and the average number of drinks consumed, the West and the South had the lowest percentage of students reporting binge drinking episodes and the Northeast had the highest. In the Northeast, one out of every four students engaged in binge drinking three or more times during a two-week period.

Prevalence: Other Drugs

There is significant national concern over the use and consequences of drugs other than alcohol, such as tobacco and a host of illegal drugs. Table 5·4 presents the prevalence of drug use "in the last year" by students at institutions of higher education in each of the four regions of the country.

Table 5·4. Percent of students reporting frequency of use of all drugs within the last year, by region. (N=55,751.)

Substance	Frequency of use								
	Never	1 per year	6 per year	1 per month	2 per month	1 per week	3 per week	5 per week	Daily
Tobacco									
West	68.6	5.6	4.4	1.7	2.0	1.8	2.1	2.5	11.3
North Central	57.6	8.0	7.2	2.4	3.0	2.4	2.9	2.9	13.6
South	61.0	5.9	4.2	1.9	2.3	2.0	2.8	2.9	16.9
Northeast	54.5	7.8	6.5	2.3	3.2	2.7	3.2	3.6	16.2
Marijuana									
West	76.8	8.8	4.9	2.2	2.1	1.7	1.4	1.1	1.0
North Central	76.9	9.8	5.4	2.3	2.1	1.4	–	0.7	–
South	77.8	8.1	4.7	2.2	2.4	–	1.4	1.0	–
Northeast	62.7	12.2	8.1	3.8	4.3	3.1	2.5	1.8	1.5
Cocaine									
West	93.5	3.4	1.5	0.5	0.5	0.3	0.2	0.1	0.1
North Central	96.2	2.2	0.9	0.3	0.2	0.2	0.1	–	0.1
South	95.4	2.8	0.9	0.3	0.3	0.1	–	–	0.1
Northeast	93.7	3.9	1.3	0.4	0.3	0.1	0.1	–	0.2
Amphetamines									
West	95.9	1.9	0.9	0.3	0.3	0.2	0.2	0.1	0.1
North Central	94.9	2.3	1.2	0.4	0.5	0.3	0.2	0.1	0.1
South	94.0	2.6	1.3	0.7	0.7	0.2	0.3	0.1	0.1
Northeast	95.2	2.4	1.0	0.4	0.4	0.2	0.1	0.1	0.2
Sedatives									
West	97.9	0.9	0.5	0.2	0.2	0.1	0.1	–	0.1
North Central	98.4	0.5	0.4	0.2	0.1	0.1	0.1	–	0.1
South	96.5	1.4	0.8	0.4	0.4	0.2	0.1	–	0.1
Northeast	97.7	0.9	0.5	0.3	0.1	0.1	0.1	–	0.1
Hallucinogens									
West	96.1	2.3	0.9	0.3	0.1	0.1	0.1	–	0.1
North Central	96.2	2.3	0.8	0.2	0.2	0.1	0.1	–	–
South	94.7	2.7	1.4	0.5	0.4	0.1	–	–	0.1
Northeast	92.7	4.0	2.1	0.6	0.3	0.1	–	–	0.2

(continues)

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Table 5·4. *(cont.)* Percent of students reporting frequency of use of all drugs within the last year, by region.

	Frequency of use								
Substance	Never	1 per year	6 per year	1 per month	2 per month	1 per week	3 per week	5 per week	Daily
Opiates									
West	99.4	0.2	0.1	–	0.1	–	0.1	–	0.1
North Central	99.4	0.3	0.1	–	0.1	–	–	–	0.1
South	99.5	0.2	0.1	0.1	–	–	–	–	–
Northeast	99.1	0.5	0.1	0.1	0.1	–	–	–	0.2
Inhalants									
West	98.8	0.7	0.2	0.1	0.1	–	–	–	0.1
North Central	98.2	1.0	0.4	0.1	0.1	0.1	–	–	0.1
South	97.6	1.3	0.6	0.2	0.1	–	–	–	0.1
Northeast	97.0	1.6	0.7	0.1	0.1	0.1	–	–	0.2
Designer drugs									
West	98.3	0.9	0.3	0.1	0.1	–	–	–	0.1
North Central	98.7	0.8	0.2	0.1	0.1	0.1	–	–	0.1
South	96.1	2.2	1.0	0.3	0.2	0.1	0.1	–	0.1
Northeast	97.9	1.3	0.4	0.1	0.1	–	–	–	0.1
Steroids									
West	99.3	0.2	0.1	–	–	–	0.1	–	0.2
North Central	99.4	0.2	0.1	–	0.1	0.1	0.1	–	0.1
South	99.3	0.3	0.1	–	0.1	0.1	–	0.1	0.1
Northeast	99.3	0.2	0.1	–	–	0.1	0.1	–	0.2
Other illegal drugs									
West	98.6	0.7	0.3	0.1	0.1	0.1	–	–	0.1
North Central	98.7	0.6	0.3	0.1	0.1	–	–	–	0.1
South	98.6	0.7	0.2	0.1	0.2	0.1	–	–	0.1
Northeast	98.7	1.1	0.4	0.2	0.2	–	–	–	0.2

Table 5·5 summarizes information above regarding the percentage of students who used each of the six most commonly used drugs "in the last year." The Northeast shows the greatest alcohol, tobacco, marijuana, and hallucinogen use. The West is the lowest in alcohol and tobacco, while the West and Northeast are highest in cocaine use. The South shows the highest amphetamine use.

Age of First Use

Table 5·6 reports the ages at which students first used alcohol and other drugs. For alcohol, the West showed the highest percentage of students whose age of first use was under 12. The greatest percent of students who reported never using marijuana attended school in the South; the next greatest percent of non-users were those in the North Central states. In the four regions, the highest percent of students first using a number of the listed drugs was during those years that are considered "traditional" college age.

Table 5·5. Prevalence of the most frequently used drugs "in the last year" by region. (N=56,244.)

Region	Alcohol	Tobacco	Marijuana	Cocaine	Hallucinogens	Amphetamines
West	76.7	31.4	23.2	6.5	3.9	4.1
North Central	88.6	42.4	23.4	3.8	3.8	5.1
South	80.7	39.0	22.2	4.6	5.3	6.0
Northeast	91.6	45.5	37.3	6.3	7.3	4.8

Table 5.6. Percent of self-reported age of first use for all drugs by region. (N=56,770.)

Substance	Age of first use							
	Less than 10	10–11	12–13	14–15	16–17	18–25	26 or older	Never
Tobacco								
West	4.5	5.7	12.2	12.3	10.7	8.5	0.4	45.7
North Central	3.7	5.0	12.2	14.6	14.6	10.4	0.2	38.8
South	3.8	5.3	13.6	14.6	12.4	7.3	0.4	42.6
Northeast	3.6	5.5	15.9	15.7	13.6	7.8	0.1	37.7
Alcohol								
West	5.2	3.8	12.8	23.4	23.1	16.6	0.8	14.3
North Central	4.4	3.2	12.9	26.7	29.6	16.6	0.2	6.4
South	4.0	3.2	12.5	27.7	25.7	14.8	0.5	11.6
Northeast	4.9	3.7	17.0	31.4	26.0	12.1	0.2	4.8
Marijuana								
West	0.9	1.2	6.7	12.2	14.0	10.6	0.9	53.5
North Central	0.3	0.6	3.5	9.1	14.9	13.3	0.5	57.8
South	0.4	0.7	4.4	10.5	15.2	8.1	0.6	60.2
Northeast	0.5	0.8	5.9	14.6	18.6	13.1	0.3	46.1
Cocaine								
West	0.2	0.1	0.4	2.0	6.4	8.8	1.4	80.9
North Central	0.1	–	0.2	0.6	2.4	5.4	0.5	90.8
South	0.1	–	0.1	0.9	3.4	5.6	0.5	89.4
Northeast	0.2	0.1	0.3	1.5	5.3	6.2	0.4	86.0
Amphetamines								
West	0.2	0.1	1.3	4.3	6.1	5.3	0.4	82.4
North Central	0.1	0.2	0.9	3.5	5.4	5.2	0.2	84.6
South	0.1	0.1	1.3	3.9	6.0	5.3	0.1	83.1
Northeast	0.2	0.1	1.3	4.3	5.0	3.4	0.1	85.7
Sedatives								
West	0.2	0.1	0.7	2.1	2.6	2.8	0.4	91.2
North Central	0.1	0.1	0.3	1.1	1.5	1.9	0.3	94.7
South	0.1	0.1	0.7	1.9	2.9	2.8	0.2	91.3
Northeast	0.2	0.1	0.5	1.7	1.7	1.7	0.2	94.0

(continues)

Table 5·6. *(cont.)* Percent of self-reported age of first use for all drugs by region.

Substance	Age of first use							
	Less than 10	10–11	12–13	14–15	16–17	18–25	26 or older	Never
Hallucinogens								
West	0.1	0.1	0.5	2.3	4.6	4.9	0.2	87.4
North Central	0.1	0.1	0.2	1.0	2.7	4.2	0.1	91.7
South	0.1	0.1	0.3	1.6	3.8	4.7	0.1	89.4
Northeast	0.2	0.1	0.3	1.9	4.7	5.1	0.1	87.6
Opiates								
West	0.1	–	0.1	0.4	0.1	1.0	0.2	97.6
North Central	0.1	–	0.1	0.2	0.4	0.8	–	98.4
South	–	–	0.1	0.1	0.5	0.6	–	98.6
Northeast	0.2	0.1	0.1	0.3	0.6	0.8	–	97.9
Inhalants								
West	0.6	0.5	1.2	1.5	1.0	0.9	–	94.4
North Central	0.5	0.3	1.1	1.3	1.4	1.0	–	94.3
South	0.4	0.4	1.1	1.7	1.7	1.2	0.1	93.5
Northeast	0.9	0.5	1.1	2.0	1.8	1.2	–	92.4
Designer drugs								
West	0.1	–	0.1	0.3	1.0	2.4	0.2	95.9
North Central	0.1	–	–	0.1	0.6	1.4	0.1	97.7
South	0.1	–	0.1	0.4	2.0	4.1	0.2	93.2
Northeast	0.2	–	0.1	0.3	1.0	2.0	0.1	96.3
Steroids								
West	0.1	–	–	0.1	0.2	0.7	0.1	98.6
North Central	0.1	–	–	0.1	0.2	0.6	0.1	98.9
South	0.1	–	–	0.2	0.4	0.8	0.1	98.4
Northeast	.2	0.1	–	0.1	0.3	0.5	0.1	98.7
Other illegal drugs								
West	0.7	0.1	0.4	0.8	1.1	1.6	0.2	95.1
North Central	0.7	0.1	0.2	0.5	0.7	1.2	0.1	96.4
South	0.4	0.1	0.3	0.9	1.1	1.2	0.1	95.9
Northeast	0.7	0.1	0.3	0.7	1.2	1.5	0.1	95.4

Consequences

Table 5·7 presents the self-reported consequences of alcohol and other drug use during the previous year, listed by region. Across almost all categories, the percent of students reporting adverse consequences resulting from their alcohol and drug use is highest in the Northeast and lowest in the West. These regional findings closely parallel use patterns. With respect to trouble with authorities and blackouts, the figures in the Northeast are approximately double those reported for the West.

The North Central region had the highest percentage of students reporting that they operated a vehicle under the influence. With respect to numerous other consequences (hangovers, academic trouble, trouble with authorities, property damage, arguments and fights, nausea and vomiting, missed classes, being criticized for substance use, memory loss, regretted actions, injuries), the North Central region demonstrated the second-highest percentages of students.

Table 5·7. Percent of students reporting consequences resulting from drug or alcohol use by region. (N=55,670.)

	Frequency of consequence within last year					
Consequence	None	Once	Twice	3 to 5	6 to 9	10 or more
Had a hangover						
West	48.2	14.6	11.0	12.3	5.1	8.9
North Central	32.7	14.1	11.3	17.3	8.3	16.3
South	43.1	14.3	11.3	13.3	6.1	12.0
Northeast	28.5	13.6	11.9	18.4	9.0	18.5
Performed poorly on a test or project						
West	82.1	7.6	4.5	3.7	1.0	1.1
North Central	74.9	10.5	6.2	5.8	1.5	1.2
South	78.1	8.9	5.0	5.0	1.6	1.4
Northeast	72.7	11.1	6.7	6.2	1.8	1.5
Trouble with police or other campus authorities						
West	91.8	4.9	2.0	0.8	0.3	0.3
North Central	85.2	9.3	3.0	1.8	0.4	0.3
South	89.7	6.4	2.2	1.3	0.2	0.2
Northeast	81.1	10.8	4.0	2.9	0.6	0.6
Damaged property, pulled fire alarm, etc.						
West	94.7	2.7	1.1	0.9	0.2	0.5
North Central	91.8	3.7	1.8	1.7	0.4	0.5
South	93.7	3.0	1.5	1.1	0.3	0.4
Northeast	89.6	4.8	2.4	1.8	0.6	0.5
Argument or fight						
West	76.3	9.7	6.4	4.7	1.3	1.7
North Central	64.2	13.0	9.5	8.6	2.3	2.3
South	69.8	11.5	8.2	6.5	1.8	2.2
Northeast	58.7	14.5	11.4	9.6	2.7	3.1
Nauseated or vomited						
West	61.3	16.9	10.5	7.3	2.1	1.8
North Central	46.9	20.7	13.8	12.0	3.6	3.1
South	54.7	18.1	11.4	9.7	3.2	3.0
Northeast	40.1	21.2	15.5	14.4	4.7	4.0

(continues)

Table 5·7. *(cont.)* Percent of students reporting consequences resulting from drug or alcohol use by region.

	Frequency of consequence within last year					
Consequence	None	Once	Twice	3 to 5	6 to 9	10 or more
Driven a car while under the influence						
West	71.1	10.5	6.1	6.2	2.1	4.0
North Central	58.1	13.7	8.4	9.3	3.7	6.6
South	65.2	10.9	7.2	7.4	3.1	6.2
Northeast	65.5	12.1	7.0	7.4	3.1	4.9
Missed a class						
West	79.0	6.0	5.5	5.6	1.9	2.1
North Central	67.3	8.4	8.0	8.7	3.5	4.1
South	74.0	7.1	6.5	6.7	2.7	3.0
Northeast	61.3	9.4	9.2	10.6	4.3	5.2
Been criticized by someone I know						
West	77.9	9.3	5.1	4.3	1.2	2.2
North Central	69.5	12.1	8.2	6.1	1.7	2.6
South	73.1	10.1	7.2	5.4	1.4	2.8
Northeast	64.5	13.1	9.4	7.6	2.2	3.2
Thought I might have a drinking or other drug problem						
West	89.3	4.7	1.9	1.7	0.5	1.9
North Central	88.3	5.2	2.6	1.8	0.6	1.5
South	90.1	4.4	1.9	1.4	0.5	1.6
Northeast	85.8	5.9	3.1	2.4	0.9	1.8
Had a memory loss						
West	80.9	8.0	4.9	3.2	1.2	1.8
North Central	69.4	11.4	7.7	6.4	2.3	2.8
South	76.8	9.1	5.8	4.1	1.8	2.4
Northeast	63.1	12.5	9.7	7.5	3.2	3.9
Done something I later regretted						
West	70.3	13.1	7.5	5.5	1.4	2.2
North Central	57.6	15.9	11.4	9.2	2.8	3.2
South	65.0	14.0	8.8	7.4	2.0	2.8
Northeast	52.6	17.3	12.6	10.2	3.6	3.7

(continues)

Table 5·7. (*cont.*) Consequences resulting from drug or alcohol use by region.

	Frequency of consequence within last year					
Consequence	None	Once	Twice	3 to 5	6 to 9	10 or more
Arrested for DWI, DUI						
West	98.1	1.3	0.2	0.1	–	0.2
North Central	98.3	1.3	0.2	0.1	–	0.1
South	98.4	1.2	0.2	0.1	–	0.1
Northeast	98.6	1.0	0.1	0.1	–	0.2
Sexual advantage						
West	88.6	5.6	2.6	1.8	0.4	1.0
North Central	84.1	7.8	3.9	2.5	0.7	1.0
South	87.0	6.8	2.9	2.0	0.5	0.8
Northeast	81.4	9.1	4.9	2.7	0.8	1.1
Tried unsuccessfully to stop using						
West	94.3	2.3	1.3	1.0	0.3	0.8
North Central	94.5	2.3	1.3	1.0	0.3	0.6
South	94.4	2.4	1.5	0.8	0.2	0.6
Northeast	93.5	2.8	1.6	1.1	0.3	0.8
Thought about or tried to commit suicide						
West	95.0	2.5	1.1	0.7	0.2	0.6
North Central	94.6	2.8	1.2	0.6	0.2	0.5
South	94.4	3.0	1.2	0.8	0.1	0.5
Northeast	93.8	3.2	1.2	0.8	0.3	0.6
Been hurt or injured						
West	88.7	5.9	2.8	1.6	0.4	0.6
North Central	83.5	8.4	4.5	2.4	0.5	0.6
South	86.6	6.8	3.2	2.0	0.5	0.8
Northeast	77.9	11.0	5.7	3.2	0.9	1.2

6. The Campus Environment

Ernest Boyer (1987) reported that a "college of quality remains a place where curricular and co-curricular are viewed as having a relationship to each other." This is important in terms of creating a sense of community. The campus environment, indeed, is a product of both.

For better or worse, the campus culture with respect to alcohol and drugs can exert a profound influence on both curricular and co-curricular aspects of the college experience. This chapter focuses on students' responses to questions on the Core Alcohol and Drug Survey which were intended to address the following aspects of the overall social milieu: perceptions of campus use, perceptions of campus climate with respect to drugs and alcohol, preference for availability of drugs and alcohol in the campus area, awareness of campus policies and enforcement, and students' family histories of alcohol and drug abuse.

Perceptions of Campus-Wide Use Habits

Table 6·1 describes students' perceptions of the extent of use of alcohol and other drugs on their campuses. Students at four-year institutions perceived a greater use of alcohol on their campuses than did students at two-year institutions. Students at two-year institutions perceived a slightly greater use of cocaine on their campuses than students at four-year institutions.

Students' perceptions of use on campus generally tends to be greater than is reflected in the actual percent of students who use alcohol and other drugs, a phenomenon noted by Perkins and Berkowitz (1986).

Table 6·1. Student perception of other students' use.
(N=54,406; two-year=12,076; four-year=42,330.)

Substance	Percent of students					
	None	A few	Several	Many	Most	All
How many of the students on your campus do you think use the following...?						
Tobacco						
Two-year	2.7	8.6	20.8	54.0	13.3	0.7
Four-year	0.9	5.6	20.2	60.0	12.9	0.5
Overall	1.3	6.2	20.3	58.8	13.0	0.5
Alcohol						
Two-year	2.4	4.8	10.0	34.4	43.8	4.5
Four-year	0.5	1.2	3.7	22.4	64.5	7.6
Overall	0.9	2.0	5.0	25.0	60.2	6.9
Marijuana						
Two-year	5.3	21.5	34.1	32.3	6.3	0.5
Four-year	1.9	18.8	37.5	35.6	5.8	0.4
Overall	2.7	19.3	36.8	34.9	5.9	0.4
Cocaine						
Two-year	10.4	45.8	30.0	12.3	1.2	0.2
Four-year	7.3	55.7	28.6	7.6	0.5	0.2
Overall	8.0	53.6	29.0	8.6	0.7	0.2
Amphetamines						
Two-year	13.0	50.4	25.2	10.0	1.1	0.2
Four-year	9.5	54.8	26.2	8.5	0.8	0.2
Overall	10.3	53.9	26.0	8.9	0.8	0.2
Sedatives						
Two-year	16.6	56.3	19.9	6.3	0.7	0.2
Four-year	13.7	62.5	19.0	4.2	0.4	0.2
Overall	14.3	61.2	19.2	4.7	0.4	0.2

(continues)

Table 6·1. *(cont.)* Student perception of other students' use.

Substance	Percent of students					
	None	A few	Several	Many	Most	All
How many of the students on your campus do you think use the following...?						
Hallucinogens						
Two-year	23.6	55.6	15.0	4.9	0.7	0.2
Four-year	17.5	60.4	16.6	4.9	0.4	0.2
Overall	18.8	59.4	16.2	4.9	0.5	0.2
Opiates						
Two-year	28.8	55.5	11.4	3.5	0.5	0.2
Four-year	25.4	61.8	10.3	2.1	0.2	0.1
Overall	26.1	60.5	10.6	2.4	0.3	0.2
Inhalants						
Two-year	32.6	52.6	10.5	3.4	0.6	0.3
Four-year	27.6	58.9	10.4	2.5	0.3	0.2
Overall	28.7	57.6	10.5	2.7	0.4	0.2
Designer drugs						
Two-year	27.8	51.8	13.2	5.8	1.2	0.3
Four-year	24.3	58.9	12.4	3.8	0.5	0.2
Overall	25.1	57.4	12.6	4.2	0.6	0.2
Steroids						
Two-year	17.0	49.6	22.3	9.6	1.3	0.3
Four-year	11.6	51.1	28.0	9.0	0.6	0.2
Overall	12.4	50.7	26.9	9.1	0.7	0.2
Other illegal drugs						
Two-year	20.6	52.8	16.6	7.6	1.7	0.6
Four-year	17.0	59.1	16.9	5.8	0.9	0.4
Overall	17.8	57.7	16.8	6.2	1.1	0.4

Perceptions of Campus Climate Toward Use of Alcohol and Drugs

Table 6-2 details students' perceptions regarding their campuses' policies and climate toward alcohol and other drugs. Overall, three-fourths of the students were aware of the existence of campus alcohol and drug policies, although awareness was greater at four-year institutions.

Half of the students at two-year institutions did not know whether their campuses had such policies, even though the provision of campus policies is mandated by federal regulation. Of those students at two-year institutions who were aware of campus alcohol and drug policies, only half said that policies were enforced and many did not know.

Fewer students were aware of the existence of alcohol and other drug awareness programs compared with the number who were aware of the existence of policies regarding substance use and abuse. Half of the students at four-year institutions did not know of the existence of such prevention programs, as compared with two-thirds of those at two-year institutions.

More than two-thirds of the students believed that their campuses were concerned about the prevention of alcohol and other drug use. Relatively few students feel that their campuses are unconcerned.

Only seven percent of the students indicated a personal involvement in drug abuse prevention efforts on their campuses. While the percentage is small, the corresponding *number* of involved students may be sizable: a campus of 10,000 students may have 700 students personally involved in drug prevention efforts on campus.

Table 6-2. Students' responses to questions about campus environment. (N=55,649; two-year=12,615; four-year=43,034.)

Question	Percent of students		
	Yes	No	Don't know
Does your campus have drug and alcohol policies?			
Two-year	50.9	1.9	47.2
Four-year	83.2	0.8	16.0
Overall	76.1	1.0	22.9
If so, are they enforced? (Answered only by students who were aware of campus policies, N=41,418)			
Two-year	47.7	5.5	46.8
Four-year	60.5	12.3	27.2
Overall	58.7	11.2	30.1
Does your campus have a drug and alcohol prevention program?			
Two-year	27.6	4.8	67.6
Four-year	44.7	4.1	51.2
Overall	40.9	4.3	54.8
Do you believe your campus is concerned about the prevention of drug and alcohol use?			
Two-year	62.6	7.2	30.2
Four-year	70.8	11.0	18.2
Overall	69.1	10.1	20.8
Are you actively involved in efforts to prevent drug and alcohol use problems on your campus?			
Two-year	6.6	93.4	–
Four-year	7.2	92.8	–
Overall	7.1	92.9	–

Family History of Substance Abuse

Table 6·3 details students' self-reported family histories of substance abuse. The results are listed separately for two- and four-year institutions. Students were three times more likely to indicate that their fathers had substance abuse problems than their mothers. Looking at nuclear family members, the problems seemed to be significantly greater among families of students at two-year institutions. No major differences were observed in the extended families of students at two- and four-year campuses.

Table 6·3. Family history of alcohol and drug problems.

	Percent of students		
Relation to student	Two-year (N=12,039)	Four-year (N=41,104)	Overall (N=53,143)
Have any of your family had alcohol or other drug problems?			
Mother	8.0	4.8	5.5
Father	20.3	14.6	15.8
Stepmother	1.1	0.8	0.8
Stepfather	3.8	2.3	2.6
Brother or sister	18.9	12.1	13.6
Mother's parents	10.7	11.7	11.4
Father's parents	9.3	10.9	10.5
Aunts and uncles	22.0	21.5	21.6
Spouse	5.0	1.4	2.2
Children	1.9	0.6	0.9

Preference for Availability of Alcohol and Other Drugs

A frequently held perception is that college students drink or want to drink and are ambivalent about other drugs. Some models of prevention assume that there is a critical mass of students who want to live in an alcohol- and drug-free environment. In order to determine the numbers of such students, a question was included on the Core Survey which asked whether students would or would not prefer to have alcohol and other drugs available and used at social events in and around campus. Tables 6·4 and 6·5 represent a summary of students' responses.

Overall, one-third of the students preferred an alcohol-free environment and 87 percent of the students preferred a drug-free environment. More males than females wanted alcohol available; twice as many males wanted other drugs available.

Table 6·6 describes the relationship between the frequency of alcohol use and students' expressed preference for having other drugs available. Only five percent of infrequent drinkers preferred to have other drugs available, but this figure rose progressively to encompass 49 percent of daily drinkers.

Table 6·4. Percent of students indicating a desire for the non-availability of alcohol and drugs at social events in and around campus.
(N=50,868; two-year=11,347; four-year=39,521.)

	Percent of students		
Prefers substance-free environment	Two-year	Four-year	Overall
With respect to alcohol	47.9	28.4	32.6
With respect to other drugs	88.2	86.8	87.1

Table 6-5. Percent of students indicating a desire for the non-availability of alcohol and drugs at social events in and around campus by gender. (N=47,902; males=19,676; females=28,226.)

	Percent of students	
Prefers substance-free environment	Male	Female
With respect to alcohol	26.3	37.0
With respect to other drugs	82.0	90.7

Table 6-6. Preference for availability of drugs by frequency of alcohol use. (N=50,718.)

Frequency of *alcohol* use	Percent of students who prefer to have *other drugs* available
Less than monthly	5.0
Once per month	7.8
Twice per month	9.4
Once per week	14.1
3 times per week	24.9
5 times per week	36.7
Every day	49.0

7. The Legal Versus Illegal Use of Alcohol Among College Students

THIS CHAPTER FOCUSES on the use of alcohol, the most widely used drug among college students in the United States. Unlike other drugs, alcohol is legal for some students – those 21 years of age or older – and illegal for all others. In order to address issues regarding the differences between those illegally using alcohol and those legally consuming this drug, we present the analyses that follow.

Consumption

The average number of alcoholic drinks consumed per week among students overall is 5.0 drinks. Among those under 21, it is 5.5 drinks, and among those 21 and older, it is 4.2 drinks. Table 7·1 provides data regarding the frequency of alcohol use among those students above and below the 21-year threshold. A slightly higher percentage of un-

Table 7·1. Percent of students reporting frequency of alcohol use by age of student. (N=56,244.)

	Percent of students	
Frequency of alcohol use	Under 21 (N=30,223)	21 or older (N=26,021)
Never	13.6	16.4
Once per year	7.4	6.2
6 times per year	11.6	12.4
Once per month	7.6	7.8
Twice per month	14.9	12.6
Once per week	22.8	22.2
3 times per week	18.1	17.0
5 times per week	3.4	4.3
Every day	0.7	1.2

derage students reported consuming alcohol in the last year as compared with those of legal drinking age. Slightly more students of legal drinking age consume alcohol five or more days a week.

Table 7·2 focuses on binge drinking, that is, the consumption of five or more drinks in a sitting. Binge drinking in the previous two weeks is a standard measure, having been used in a number of research studies. It is frequently associated with campus violence, sexual assault, vandalism, and residence hall damage. Note that a substantially greater percentage of those under the legal drinking age are reporting episodes of binge drinking in the two weeks prior to filling out the Core Survey. For every frequency listed (other than "None"), the underage students show greater percentages engaging in binge drinking than older students.

Table 7·3 examines the reported age of first use of alcohol for students under and over the legal drinking age. The underage students report first using alcohol at earlier ages than the older students. It is not clear how to interpret this finding because this could represent cohort differences, selective remembering, a growing societal phenomenon of students using at earlier and earlier ages, or other phenomena.

Table 7·2. Percent of students reporting frequency of binge drinking episodes "in the last two weeks," by age of students. (N=57,093.)

	Percent of students	
Number of episodes	Under 21 (N=30,579)	21 or older (N=26,514)
None	52.5	65.0
One	14.5	12.6
Two	10.9	8.2
3 to 5	14.1	9.6
6 to 9	5.1	3.0
10 or more	2.9	1.7

Grade Average

Table 7·4 summarizes the relationship between students' self-reported grade averages and the number of drinks consumed per week, for students under and over the legal drinking age. As can be seen, the heaviest drinkers obtained the lowest grades, in both age groups.

Table 7·3. Percent of students reporting age of first use of alcohol, by current age of students.

	Percent of students	
First use of alcohol	Under 21 (N=27,450)	21 or older (N=24,291)
Under 10	4.9	4.3
10 or 11	3.8	3.1
12 or 13	15.5	11.8
14 or 15	31.0	22.8
16 or 17	25.8	27.1
18 to 25	9.1	22.3
26 or older	N/A	0.8
Never	9.8	7.7

Table 7·4. Average number of drinks per week by grade average and age of students.

	Average number of drinks		
Self-reported grade average	Overall (N=54,291)	Under 21 (N=29,516)	21 or older (N=24,775)
A	3.3	3.8	3.0
B	5.0	5.5	4.3
C	6.7	7.3	5.7
D or F	10.0	9.1	12.8

Consequences

Table 7·5 describes the percentage of students experiencing adverse consequences of alcohol and drug use in the twelve months preceding the administration of the survey. A higher proportion of underage students reported adverse consequences than older students for most of the behaviors studied. In only two instances – driving while intoxicated and arrests for DWI/DUI – did students 21 or older report a greater incidence of consequences. Approximately 12 percent of both underage and overage students reported that they believed they had a substance abuse problem.

Note that the following consequences occurred among the underage students at rates that are approximately double those of the older students: criticism for substance use, arguments or fights, physical harm or injury, and trouble with police, residence hall, or other authorities.

Students' Perceptions of the Campus Climate

On the Core Survey, students were asked about their perceptions regarding policies and enforcement on their campuses, perceptions of other students' use of alcohol, and their own desire for a substance-free environment. In each case, the data are listed for those under the legal drinking age and for those over the legal drinking age. Tables 7·6 and 7·7 summarize the students' responses.

Those under the legal drinking age were more aware that their campuses have drug and alcohol policies and were more aware of the enforcement of campus policies. (See Table 7·6.) The majority of students in both age groups did not know if their institutions had drug prevention programs. At the same time, underage students appeared to be more aware of drug and alcohol prevention programs on their campuses and a slightly higher percentage of underage students be-

Table 7·5. Consequences of alcohol and other drug use by age of students. (N=55,670; under 21=29,997; 21 or older=25,673.)

	Percent of students experiencing consequence *at least once* in past year	
Consequence	Under 21	21 or older
Hangover	65.9	59.1
Hangover *more than five times*	23.4	19.6
Poor test score	26.6	19.5
Trouble with police, etc.	17.7	8.5
Damaged property, fire alarm	9.8	5.3
Argument or fight	38.8	19.5
Nauseated or vomited	57.0	41.6
Driven while intoxicated	34.9	36.6
Missed a class	32.7	26.1
Been criticized	50.3	22.5
Thought I had a problem	11.7	11.8
Had a memory loss	33.1	22.2
Later regretted action	45.4	32.1
Arrested for DWI, DUI	1.4	2.0
Sexual advantage	18.4	11.0
Tried, failed to stop	6.2	5.4
Suicide attempt, thoughts	6.6	4.3
Been hurt, injured	20.7	10.7

lieved their campuses were concerned about the prevention of drug and alcohol use. Only seven percent of students in both age groups were actively involved in drug and alcohol prevention programming on their campuses.

Table 7·6. Students' responses to questions about campus environment by age of students. (N=56,161; under 21=30,176; 21 or older=25,985.)

Question · Response	Percent of students	
	Under 21	21 or older
Does your campus have drug and alcohol policies?		
Yes	82.6	68.0
No	1.0	1.0
Don't know	16.4	30.9
If so, are they enforced? (Answered only by students who were aware of campus policies, N=46,052.)		
Yes	52.4	37.7
No	11.2	7.8
Don't know	36.4	54.6
Does your campus have a drug and alcohol prevention program?		
Yes	44.2	37.0
No	4.4	4.3
Don't know	51.5	58.9
Do you believe your campus is concerned about the prevention of drug and alcohol use?		
Yes	70.7	67.0
No	10.9	9.2
Don't know	18.4	23.8
Are you actively involved in efforts to prevent drug and alcohol use problems on your campus?		
Yes	7.2	7.1
No	92.8	92.9
How many of the students on your campus do you think use alcohol?		
None	0.7	1.2
A few	1.3	2.8
Several	3.8	6.8
Many	20.9	30.1
Most	64.8	54.3
All	8.5	4.8

Note that the underage students perceived more of their fellow students using alcohol than did the older students. Higher percentages of the older students preferred an alcohol-free environment and a drug-free environment. (See Table 7·7.)

Overall, it is clear from the data presented in this section that illegal users of alcohol consume greater quantities of alcohol than those for whom the drug is legal. They binge drink more often and report an earlier age of first use. Higher percentages of underage students report adverse consequences from their alcohol and other drug use than older students. They are more aware of campus policies and enforcement, perceive more of their peers as using alcohol, and are more in favor of having alcohol and drugs present at social events in and around campus.

Table 7·7. Percent of students indicating a desire for the non-availability of alcohol and drugs at social events in and around campus. (N=51,284; under 21=27,660; 21 or older=23,624.)

	Percent of students	
Prefers substance-free environment	Under 21	21 or older
Prefers alcohol-free environment	27.4	39.0
Prefers environment free of other drugs	85.0	89.5

8. Pre/Post-Test Population

OF THE 78 INSTITUTIONS that used representative sampling techniques for the Core Alcohol and Drug Survey, 37 institutions administered follow-up surveys. These matched pre- and post-test samples involved 21,151 students on the pre-test and 15,018 on the post-test. This chapter will describe changes that occurred from the pre-test administration of the Core to the post-test administration.

The pre-tests were administered in academic year 1989–90 and the post-tests were administered in academic year 1990–91. For some institutions, the time between the pre- and post-test may have been as short as 12 months. This may be attributed to the fact that the Core Survey was not generally available until early in 1990. The sample includes students enrolled in two- and four-year institutions. The demographic attributes of students included in the sample are listed in Table 8-1.

The purpose of the pre- and post-test analysis is to identify changes that have occurred on the campuses which were involved in FIPSE-funded alcohol and drug prevention programming. It is difficult to attribute causal factors for these changes; however, the hypothesis is that the impact of these programs on campuses will change the environment and these changes will be shown in a decrease in substance use, in negative consequences, in perception of use, and in an increase in the awareness of campus alcohol and drug policies and program efforts.

Table 8·1. Demographics of students included in pre-post analysis.

Item	Percent of students	
	Pre-test (N=21,151)	Post-test (N=15,018)
Age		
19 and under	25.4	22.8
20	32.3	32.0
21 or 22	21.5	19.9
23 or 24	6.5	7.4
24 to 30	7.2	8.5
31 to 40	5.0	6.6
41 and over	2.0	2.9
Gender		
Male	41.2	40.0
Female	58.8	60.0
Ethnic origin		
American Indian	1.2	1.1
Hispanic	3.0	2.9
Asian/Pacific Islander	5.0	5.2
White (non-Hispanic)	84.8	84.6
Black (non-Hispanic)	4.9	4.7
Other	1.1	1.4
Marital status		
Single	87.7	85.1
Married	10.0	11.4
Separated	0.4	0.7
Divorced	1.8	2.5
Widowed	0.2	0.3
Residence		
Location		
On campus	43.9	43.4
Off campus	56.1	56.6

(continues)

Table 8·1. *(cont.)* Demographics of students included *in pre-post analysis.*

Item	Percent of students	
	Pre-test (N=21,151)	Post-test (N=15,018)
Residence *(cont.)*		
Living arrangement		
Residence hall	37.4	39.5
Approved housing	5.6	5.0
Fraternity or sorority	2.0	1.6
With roommate	33.7	36.7
Alone	6.6	7.1
With parent(s)	21.5	18.6
With spouse	9.0	10.6
With children	5.1	6.7
Other	3.2	3.5
Place of permanent residence		
In-state	81.9	79.7
USA, but out of state	15.9	17.4
Country other than USA	2.2	2.9
Student status		
Year in college		
Freshman	32.9	38.4
Sophomore	21.0	19.9
Junior	20.5	17.7
Senior	20.8	17.2
Graduate or professional	4.3	6.0
Not seeking a degree	0.6	0.8
Grade average		
A	20.6	22.5
B	55.9	53.0
C	22.7	23.6
D or F	0.7	0.9

(continues)

Table 8-1. *(cont.)* Demographics of students included in pre-post analysis.

Item	Percent of students	
	Pre-test (N=21,151)	Post-test (N=15,018)
Student status *(cont.)*		
Focus of coursework		
Regular college courses	87.1	85.2
Basic skills	1.8	2.4
English as a second language	0.3	0.5
Other	10.9	11.9
Enrollment status		
Full-time (12 or more credits)	91.7	88.3
Part-time (1 to 11 credits)	8.3	11.7
Employment status		
Yes, full-time	10.4	11.7
Yes, part-time	49.2	45.7
No	40.4	43.1

Table 8-2. Percent of students reporting number of drinks consumed per week, by gender.

	Percent of students					
	Pre-test			Post-test		
Number of drinks per week	Male (N=7,894	Female 11,266	Total 19,160	Male 5,572	Female 8,358	Total 13,930)
None or one	41.8	56.7	52.1	44.7	59.4	53.4
2 to 5	20.7	23.6	21.9	20.6	23.2	22.3
6 to 9	8.5	6.6	7.2	7.0	5.8	6.3
10 to 15	13.7	9.1	10.6	12.9	7.9	10.0
16 to 20	4.6	1.9	3.0	4.8	1.8	3.1
21 or more	10.5	1.8	5.3	9.7	1.7	4.9

Prevalence of Alcohol and Drug Use

Number of Drinks Per Week

Table 8·2 illustrates the average number of drinks per week reported by the pre- and post-test populations. The average number of drinks per week reported by students declined by 2.4 percent in the two-year period from 4.95 drinks to 4.83 drinks. Table 8·3 describes the number of drinks per week by size of the institution.

Binge Drinking

Table 8·4 shows the number of binge drinking episodes that students reported experiencing in the academic years 1989–90 (pre-test) and 1990–91 (post-test). There is an increase in the percent of those reporting an absence of binge drinking episodes, from 56.9 to 59.7 percent. Thus, there is a 4.9 percent decline in the incidence of re-

Table 8·3. Percent of students reporting number of drinks consumed per week, by institutional size.

	Size of institution									
	Less than 2,500		2,500 to 4,999		5,000 to 9,999		10,000 to 19,999		At least 20,000	
Number of drinks per week (N=)	Pre 3,556	Post 3,163	Pre 4,424	Post 1,913	Pre 2,777	Post 4,249	Pre 6,390	Post 3,456	Pre 2,750	Post 2,137)
None or one	49.8	51.0	57.7	63.8	49.6	49.8	51.7	50.6	66.1	61.3
2 to 5	21.4	21.8	21.8	18.5	26.6	25.0	23.2	22.5	20.3	21.7
6 to 9	9.0	6.6	6.0	5.0	8.5	6.5	7.6	7.7	6.0	4.6
10 to 15	13.6	11.6	9.5	6.3	12.4	11.2	11.2	10.6	6.7	7.9
16 to 20	4.9	4.0	2.5	2.4	3.0	3.0	3.2	3.5	1.2	1.8
21 or more	9.8	6.2	4.9	4.6	5.4	4.8	2.8	5.2	2.7	2.9

Table 8-4. Percent of students indicating binge drinking episodes "in the last two weeks" by gender.

	Percent of students					
	Pre-test			Post-test		
Number of episodes (N=	Male 16,305	Female 22,437	Total 38,742	Male 5,652	Female 8,453	Total 14,105)
None	48.0	64.9	56.9	50.6	65.7	59.7
One	13.7	13.5	14.3	13.7	13.5	13.6
Two	11.0	8.5	9.7	10.7	8.5	9.6
3 to 5	16.2	9.3	12.5	15.8	8.6	11.5
6 to 9	6.9	2.4	4.2	5.8	2.2	3.5
10 or more	4.3	1.2	2.3	3.2	1.4	2.1

Table 8-5. Percent of students reporting binge drinking episodes "in the last two weeks" by institutional size.

	Size of institution									
	Less than 2,500		2,500 to 4,999		5,000 to 9,999		10,000 to 19,999		At least 20,000	
Number of episodes (N=	Pre 3,556	Post 3,163	Pre 4,424	Post 1,913	Pre 2,777	Post 4,249	Pre 6,350	Post 3,456	Pre 2,750	Post 2,137)
None	49.2	55.4	61.0	70.8	49.8	56.3	56.7	55.0	69.6	70.0
One	14.6	13.6	13.0	8.9	16.9	14.8	14.7	16.0	12.5	11.0
Two	10.5	10.1	8.7	6.3	12.1	10.8	9.6	10.7	7.1	7.2
3 to 5	15.1	12.1	10.3	7.9	15.0	12.7	13.1	13.2	7.3	8.2
6 to 9	6.5	4.6	3.7	3.8	4.5	3.1	4.1	3.6	1.8	2.1
10 or more	3.8	3.9	3.0	2.0	1.6	2.0	1.6	1.3	1.5	1.1

ported binge drinking episodes from pre-test to post-test. For all other frequencies listed (other than "none"), there was a decrease in the percent of reported binge drinking episodes on these campuses with FIPSE drug prevention programs.

Table 8-5 describes the self-reported frequency of binge drinking by size of the institution from pre-test to post-test.

Use of Other Drugs

The frequency of alcohol and other drug use among the pre- and post-test populations is reported in Table 8-6. From the period of the pre-test to the post-test, the annual prevalance of alcohol, marijuana, and cocaine use declined. Use of tobacco and other drugs was largely unchanged.

Table 8-6. Percent of students indicating frequency of use of all drugs within the last year. (Pre-test N=20,026; post-test N=14,737.)

	Frequency of use								
Substance	Never	1 per year	6 per year	1 per month	2 per month	1 per week	3 per week	5 per week	Daily
Tobacco									
Pre-test	60.2	7.4	6.1	2.4	3.0	2.3	2.9	3.0	12.7
Post-test	60.6	7.1	6.2	2.1	2.7	2.5	2.7	3.1	13.0
Alcohol									
Pre-test	13.3	6.5	11.8	7.6	14.8	23.5	18.0	3.6	0.8
Post-test	16.0	7.2	12.0	7.9	14.0	22.7	16.1	3.1	0.8
Marijuana									
Pre-test	73.0	10.2	6.1	2.7	2.8	1.9	1.5	1.0	0.8
Post-test	77.1	9.2	4.8	2.2	2.3	1.7	1.3	0.7	0.6
Cocaine									
Pre-test	95.2	2.8	1.1	0.3	0.3	0.1	0.1	–	0.1
Post-test	96.5	2.1	0.7	0.2	0.2	0.1	0.1	–	0.1
Amphetamines									
Pre-test	95.1	2.4	1.1	0.4	0.4	0.2	0.2	0.1	0.1
Post-test	95.0	2.2	1.1	0.5	0.5	0.2	0.2	0.1	0.1
Sedatives									
Pre-test	98.0	0.8	0.5	0.3	0.1	0.1	0.1	–	0.1
Post-test	97.9	0.7	0.5	0.2	0.2	0.2	0.1	–	0.1
Hallucinogens									
Pre-test	95.3	2.7	1.2	0.4	0.2	0.1	–	–	0.1
Post-test	95.6	2.4	1.1	0.3	0.3	0.1	0.1	–	0.1
Opiates									
Pre-test	99.3	0.3	0.1	–	0.1	–	–	–	0.1
Post-test	99.4	0.2	0.1	–	0.1	–	–	–	0.1
Inhalants									
Pre-test	97.8	1.3	0.5	0.1	0.1	–	–	–	0.1
Post-test	98.1	1.0	0.4	0.1	0.1	0.1	–	–	0.2

(continues)

Table 8·6. *(cont.)* Percent of students indicating frequency of use of all drugs within the last year.

	Frequency of use								
Substance	Never	1 per year	6 per year	1 per month	2 per month	1 per week	3 per week	5 per week	Daily
Designer drugs									
Pre-test	98.1	1.2	0.4	0.1	0.1	–	–	–	0.1
Post-test	98.1	1.0	0.3	0.1	0.1	0.1	–	–	0.1
Steroids									
Pre-test	99.4	0.2	0.1	–	–	–	–	–	–
Post-test	99.4	0.2	0.1	–	0.1	–	0.1	–	0.2
Other illegal drugs									
Pre-test	98.4	0.8	0.3	0.1	0.1	0.1	–	–	0.1
Post-test	98.7	0.6	0.2	0.1	0.1	–	–	–	0.2

Consequences of Alcohol and Other Drug Use

Table 8·7 reports the changes in self-reported consequences of alcohol and other drug use between pre- and post-test administration. For each consequence, with the exception of test performance, the percent of students who reported that they had *not* experienced the consequence increased over the two-year, pre- to post-test period. In other words, the frequency of these consequences decreased, though some of the changes were small.

Table 8·7. Percent of students indicating consequences resulting from drug or alcohol use. (Pre-test N=19,852; post-test N=14,584.)

	Frequency of consequence within last year					
Consequence	None	Once	Twice	3 to 5	6 to 9	10 or more
Had a hangover						
Pre-test	35.9	14.1	11.4	15.8	7.7	15.0
Post-test	38.3	13.7	11.4	16.0	7.1	13.5
Performed poorly on a test or project						
Pre-test	76.5	9.9	5.7	5.3	1.5	1.2
Post-test	76.3	9.9	5.9	5.5	1.4	1.1
Trouble with police or other campus authorities						
Pre-test	86.5	8.2	2.9	1.7	0.5	0.3
Post-test	86.7	8.1	2.7	1.8	0.3	0.4
Damaged property, pulled fire alarm, etc.						
Pre-test	91.6	4.0	1.9	1.5	0.5	0.5
Post-test	92.9	3.4	1.5	1.3	0.3	0.6
Argument or fight						
Pre-test	65.6	12.7	9.5	7.9	2.2	2.1
Post-test	67.1	12.1	8.9	7.5	2.0	2.4
Nauseated or vomited						
Pre-test	48.3	20.0	13.3	11.6	3.6	3.1
Post-test	50.8	18.5	13.1	11.2	3.4	3.0
Driven a car while under the influence						
Pre-test	63.7	12.1	7.7	7.9	3.2	5.4
Post-test	65.1	12.2	7.1	7.4	2.9	5.3
Missed a class						
Pre-test	69.2	7.9	7.3	8.1	3.5	4.0
Post-test	70.7	7.8	7.4	7.8	2.7	3.6
Been criticized by someone I know						
Pre-test	69.3	11.8	8.3	6.3	1.8	2.6
Post-test	71.2	11.1	7.7	5.9	1.6	2.6

(continues)

Table 8·7. *(cont.)* Percent of students indicating consequences resulting from drug or alcohol use.

Consequence	Frequency of consequence within last year					
	None	Once	Twice	3 to 5	6 to 9	10 or more
Thought I might have a drinking or other drug problem						
Pre-test	88.2	5.2	2.5	1.8	0.7	1.6
Post-test	89.5	4.6	2.3	1.9	0.4	1.3
Had a memory loss						
Pre-test	70.6	10.7	7.5	6.0	2.4	2.9
Post-test	72.1	10.7	7.4	5.4	2.0	2.4
Done something I later regretted						
Pre-test	59.4	15.4	10.5	8.7	2.8	3.2
Post-test	61.5	15.1	10.1	8.2	2.5	2.7
Arrested for DWI, DUI						
Pre-test	98.4	1.2	0.2	0.1	–	0.1
Post-test	98.5	1.2	0.1	0.1	–	0.1
Sexual advantage						
Pre-test	84.1	7.9	4.0	2.4	0.6	0.9
Post-test	85.3	7.6	3.5	2.1	0.7	0.8
Tried unsuccessfully to stop using						
Pre-test	94.2	2.4	1.4	1.0	0.3	0.6
Post-test	95.0	2.2	1.3	0.8	0.3	0.5
Thought about or tried to commit suicide						
Pre-test	94.6	2.8	1.2	0.7	0.2	0.5
Post-test	94.7	2.7	1.1	0.7	0.2	0.6
Been hurt or injured						
Pre-test	83.2	8.6	4.3	2.5	0.6	0.7
Post-test	84.5	8.0	4.2	2.2	0.5	0.7

Appendix

Appendix A. Core Alcohol and Drug Survey

Core Instrument

Grantee Group of the Drug Prevention Program

Please use a number 2 pencil.

Processed by: UCS Office of Measurement Services
University of Minnesota
2520 Broadway Drive - Room 130
St. Paul, MN 55113

For official use only:

A 0 1 2 3 4 5 6 7 8 9
B 0 1 2 3 4 5 6 7 8 9
C 0 1 2 3 4 5 6 7 8 9
D 0 1 2 3 4 5 6 7 8 9
E 0 1 2 3 4 5 6 7 8 9

1. Classification:
Freshman
Sophomore
Junior
Senior
Grad./professional
Not seeking a degree

2. Age:

3. Ethnic origin:
American Indian/ Alaskan Native
Hispanic
Asian/Pacific Islander
White (non-Hispanic)
Black (non-Hispanic)
Other

4. Marital status:
Single
Married
Separated
Divorced
Widowed

5. Gender:
Male
Female

6. Is your current residence as a student:
On-campus
Off-campus

7. Are you working?
Yes, full-time
Yes, part-time
No

8. Living arrangement:
(mark all that apply)
Residence hall
Approved housing
Fraternity or sorority
With roommate(s)
Alone
With parent(s)
With spouse
With children
Other

9. Approximate cumulative grade average: *(choose one)*

A+ A A- B+ B B- C+ C C- D+ D D- F

10. The *primary* focus of your coursework at the moment: *(choose only one)*
Regular college courses
Basic skills
English as a second language
Other

11. Student status:
Full-time (12+ credits)
Part-time (1–11 credits)

12. Campus situation on alcohol and drugs:

	yes	no	don't know
a. Does your campus have drug and alcohol policies?			
b. If so, are they enforced?			
c. Does your campus have a drug and alcohol prevention program?			
d. Do you believe your campus is concerned about the prevention of drug and alcohol use?			
e. Are you actively involved in efforts to prevent drug and alcohol use problems on your campus?			

13. Place of permanent residence:
In-state
USA, but out of state
Country other than USA

14. Think back over the last two weeks. How many times have you had five or more drinks* at a sitting?
None
Once
Twice
3 to 5 times
6 to 9 times
10 or more times

*A drink is a bottle of beer, a glass of wine, a wine cooler, a shot glass of liquor, or a mixed drink.

15. Average # of drinks* you consume a week

16. At what age did you first use... *(mark one for each line)*

	Never	Under 10	10–11	12–13	14–15	16–17	18–25	26+
a. Tobacco (smoke, chew, snuff)								
b. Alcohol (beer, wine, liquor)								
c. Marijuana (pot, hash, hash oil)								
d. Cocaine (crack, rock, freebase)								
e. Amphetamines (uppers, speed)								
f. Sedatives (downers, ludes)								
g. Hallucinogens (LSD, PCP)								
h. Opiates (heroin, smack, horse)								
i. Inhalants (glue, solvents, gas)								
j. Designer drugs (ecstasy, MDMA)								
k. Steroids								
l. Other drugs								

17. Within the last year about how often have you used...
(mark one for each line)

	Never used	Once/year	2-6 times/year	Once/month	Twice/month	Once/week	3 times/week	5 times/week	Every day
a. Tobacco (smoke, chew, snuff)	○	○	○	○	○	○	○	○	○
b. Alcohol (beer, wine, liquor)	○	○	○	○	○	○	○	○	○
c. Marijuana (pot, hash, hash oil)	○	○	○	○	○	○	○	○	○
d. Cocaine (crack, rock, freebase)	○	○	○	○	○	○	○	○	○
e. Amphetamines (uppers, speed)	○	○	○	○	○	○	○	○	○
f. Sedatives (downers, ludes)	○	○	○	○	○	○	○	○	○
g. Hallucinogens (LSD, PCP)	○	○	○	○	○	○	○	○	○
h. Opiates (heroin, smack, horse)	○	○	○	○	○	○	○	○	○
i. Inhalants (glue, solvents, gas)	○	○	○	○	○	○	○	○	○
j. Designer drugs (ecstasy, MDMA)	○	○	○	○	○	○	○	○	○
k. Steroids	○	○	○	○	○	○	○	○	○
l. Other drugs	○	○	○	○	○	○	○	○	○

18. How many of the students on your campus do you think use...
(mark one for each line)

	None	A few	Some	Many	Most	All
a. Tobacco (smoke, chew, snuff)	○	○	○	○	○	○
b. Alcohol (beer, wine, liquor)	○	○	○	○	○	○
c. Marijuana (pot, hash, hash oil)	○	○	○	○	○	○
d. Cocaine (crack, rock, freebase)	○	○	○	○	○	○
e. Amphetamines (uppers, speed)	○	○	○	○	○	○
f. Sedatives (downers, ludes)	○	○	○	○	○	○
g. Hallucinogens (LSD, PCP)	○	○	○	○	○	○
h. Opiates (heroin, smack, horse)	○	○	○	○	○	○
i. Inhalants (glue, solvents, gas)	○	○	○	○	○	○
j. Designer drugs (ecstasy, MDMA)	○	○	○	○	○	○
k. Steroids	○	○	○	○	○	○
l. Other drugs	○	○	○	○	○	○

19. Where have you used...
(mark all that apply)

	Never used	On campus	Residence hall	Frat/sorority	Off campus	Where you live	In a car	Other
a. Tobacco (smoke, chew, snuff)	○	○	○	○	○	○	○	○
b. Alcohol (beer, wine, liquor)	○	○	○	○	○	○	○	○
c. Marijuana (pot, hash, hash oil)	○	○	○	○	○	○	○	○
d. Cocaine (crack, rock, freebase)	○	○	○	○	○	○	○	○
e. Amphetamines (uppers, speed)	○	○	○	○	○	○	○	○
f. Sedatives (downers, ludes)	○	○	○	○	○	○	○	○
g. Hallucinogens (LSD, PCP)	○	○	○	○	○	○	○	○
h. Opiates (heroin, smack, horse)	○	○	○	○	○	○	○	○
i. Inhalants (glue, solvents, gas)	○	○	○	○	○	○	○	○
j. Designer drugs (ecstasy, MDMA)	○	○	○	○	○	○	○	○
k. Steroids	○	○	○	○	○	○	○	○
l. Other drugs	○	○	○	○	○	○	○	○

20. Please indicate how often you have experienced the following due to your drinking or drug use during the last year...
(mark one for each line)

	Never	Once	Twice	3-5 times	6-9 times	10 or more times
a. Had a hangover	○	○	○	○	○	○
b. Performed poorly on a test or important project	○	○	○	○	○	○
c. Been in trouble with police, residence hall, or other college authorities	○	○	○	○	○	○
d. Damaged property, pulled fire alarm, etc.	○	○	○	○	○	○
e. Got into an argument or a fight	○	○	○	○	○	○
f. Got nauseated or vomited	○	○	○	○	○	○
g. Driven a car while under the influence	○	○	○	○	○	○
h. Missed a class	○	○	○	○	○	○
i. Been criticized by someone I know	○	○	○	○	○	○
j. Thought I might have a drinking or other drug problem	○	○	○	○	○	○
k. Had a memory loss	○	○	○	○	○	○
l. Done something I later regretted	○	○	○	○	○	○
m. Been arrested for DWI/DUI	○	○	○	○	○	○
n. Have been taken advantage of sexually or have taken advantage of another sexually	○	○	○	○	○	○
o. Tried unsuccessfully to stop using	○	○	○	○	○	○
p. Thought about or tried to commit suicide	○	○	○	○	○	○
q. Been hurt or injured	○	○	○	○	○	○

21. Have any of your family had alcohol or other drug problems: *(mark all that apply)*

- ☐ Mother
- ☐ Father
- ☐ Stepmother
- ☐ Stepfather
- ☐ Brothers/sisters
- ☐ Mother's parents
- ☐ Father's parents
- ☐ Aunts/uncles
- ☐ Spouse
- ☐ Children

22. Some students have indicated that alcohol or drug use at parties they attend in and around campus reduces their enjoyment, often leads to negative situations, and, therefore, they would rather not have alcohol and drugs available and used. Other students have indicated that alcohol and drug use at parties increases their enjoyment, often leads to positive situations, and, therefore they would rather have alcohol and drugs available and used. Which of these is closest to your own view?

	Have available	Not have available
With regard to drugs?	○	○
With regard to alcohol?	○	○

4/90

Appendix B. Validity and Reliability

An important consideration in the development of the Core Alcohol and Drug Survey was choosing and constructing items which would tap into various aspects of drug and alcohol use and which were consistent with relevant literature and research. Items were constructed in a manner that would account for variations in size, demographics, and structures of the institutions represented among FIPSE grantees. This appendix describes the psychometric concerns that were addressed in the development of the Core Alcohol and Drug Survey.

Please note that all validity and reliability information reported here is based on information gathered from the Core Survey shown in Appendix A.

Content-Related Validity

Validity is a central concern in test construction. A valid instrument will measure what it purports to measure. Validation involves a process of accumulating evidence.

In general, the content-related evidence demonstrates the degree to which the sample of items on a test are representative of a domain or universe of content. To establish content-related validity for this instrument, existing instruments and literature were reviewed to ensure that major aspects, consequences, and types of alcohol and drug use were adequately covered by items on the Core Alcohol and Drug Survey. A panel then reviewed each item to ensure construction of an instrument that sampled the domains of interest. The inter-rater agreement for item inclusion was .90. Professional judgment identified and rated the universe of content, selected the content sample, and specified the item format and scoring system.

Construct Validity

Construct validity refers to the extent to which an instrument measures a theoretical construct. The process of compiling construct-related evidence begins with test construction (content-related evidence) and continues until the patterns of relationships between test scores and other variables are known. Intercorrelations among items may be used to support the measurement of a certain construct (see Table B·1) as well as comparability with other instruments that purport to measure similar constructs.

Table B·1. Item intercorrelations for use and consequence questions.

Substance	Tobacco	Alcohol	Marijuana	Cocaine	Amphetamines	Sedatives	Hallucinogens	Opiates	Inhalants	Designer drugs	Steroids	Other drugs
Question 16. Age of first use. (N=32,015.)												
Tobacco	–											
Alcohol	.49	–										
Marijuana	.51	.47	–									
Cocaine	.29	.27	.49	–								
Amphetamines	.32	.29	.49	.54	–							
Sedatives	.22	.21	.33	.46	.56	–						
Hallucinogens	.26	.25	.44	.58	.52	.51	–					
Opiates	.13	.12	.19	.32	.29	.38	.39	–				
Inhalants	.21	.20	.27	.28	.32	.32	.33	.29	–			
Designer drugs	.14	.14	.24	.37	.28	.32	.40	.37	.25	–		
Steroids	.07	.08	.09	.17	.14	.18	.16	.31	.16	.27	–	
Other drugs	.12	.13	.17	.23	.24	.27	.25	.28	.23	.23	.20	–

(continues)

Table B·1. *(cont.)* Item intercorrelations for use and consequence questions.

Substance	Tobacco	Alcohol	Marijuana	Cocaine	Amphetamines	Sedatives	Hallucinogens	Opiates	Inhalants	Designer drugs	Steroids	Other drugs
Question 17. Use within last year. (N=32,834.)												
Tobacco	–											
Alcohol	.33	–										
Marijuana	.36	.38	–									
Cocaine	.21	.20	.45	–								
Amphetamines	.17	.16	.33	.49	–							
Sedatives	.12	.10	.23	.43	.50	–						
Hallucinogens	.19	.18	.48	.50	.43	.44	–					
Opiates	.09	.08	.19	.47	.45	.56	.55	–				
Inhalants	.12	.11	.22	.39	.39	.42	.49	.59	–			
Designer drugs	.12	.12	.27	.46	.44	.46	.57	.66	.55	–		
Steroids	.05	.06	.11	.29	.28	.35	.32	.52	.41	.45	–	
Other drugs	.10	.10	.25	.41	.40	.43	.48	.59	.49	.56	.42	–
Question 18. Perceptions of others' use. (N=29,803.)												
Tobacco	–											
Alcohol	.45	–										
Marijuana	.45	.47	–									
Cocaine	.32	.27	.59	–								
Amphetamines	.29	.23	.46	.62	–							
Sedatives	.26	.18	.41	.60	.76	–						
Hallucinogens	.27	.22	.46	.56	.56	.61	–					
Opiates	.20	.14	.32	.52	.56	.66	.68	–				
Inhalants	.20	.12	.27	.43	.51	.61	.59	.72	–			
Designer drugs	.22	.17	.36	.49	.51	.57	.65	.64	.63	–		
Steroids	.24	.24	.33	.44	.50	.49	.42	.49	.46	.45	–	
Other drugs	.23	.20	.36	.49	.53	.57	.54	.58	.55	.57	.55	–

(continues)

Table B-1. *(cont.)* Item intercorrelations for use and consequence questions.

Consequence	Hangover	Poor test	Trouble w/ police	Damaged property	Argument/fight	Nauseated/vomited	Driven while intox.	Missed a class	Been criticized	Thought problem
Question 20. Consequences of use. (N=29,908.)										
Hangover	–									
Poor test score	.48	–								
Trouble with police	.36	.40	–							
Damaged property pulled fire alarm	.28	.31	.47	–						
Argument or fight	.52	.46	.39	.37	–					
Nauseated or vomited	.65	.42	.35	.30	.49	–				
Driven while intoxicated	.55	.40	.34	.32	.45	.45	–			
Missed a class	.57	.63	.41	.33	.50	.51	.47	–		
Been criticized	.43	.48	.36	.30	.51	.43	.39	.49	–	
Thought I had a problem	.33	.36	.31	.25	.31	.29	.37	.34	.43	–
Had a memory loss	.53	.44	.40	.33	.47	.49	.45	.51	.47	.45
Later regretted action	.59	.50	.40	.34	.57	.53	.50	.55	.56	.43
Arrested for DWI, DUI	.12	.17	.32	.25	.16	.12	.17	.13	.14	.22
Sexual advantage	.31	.31	.28	.28	.34	.31	.31	.31	.32	.26
Tried, failed to stop	.22	.30	.26	.21	.24	.22	.26	.25	.32	.50
Suicide attempt, thoughts	.13	.22	.18	.18	.22	.18	.17	.18	.24	.29
Been hurt, injured	.37	.41	.42	.40	.47	.40	.32	.43	.44	.33

Consequence	Memory loss	Later regret	Arrest, DWI	Sexual adv.	Tried to stop	Suicide	Injured
Later regretted action	.64	–					
Arrested for DWI, DUI	.16	.15	–				
Sexual advantage	.35	.46	.21	–			
Tried, failed to stop	.31	.33	.25	.24	–		
Suicide attempt, thoughts	.22	.26	.21	.22	.28	–	
Been hurt, injured	.47	.50	.23	.36	.29	.30	–

Test-Retest Reliability

Reliability is also important in instrument development. The essence of the test-retest measure is the consistency with which individuals respond to the survey on different occasions. If the same individuals respond to the same items in the same way on different occasions, the instrument is considered a stable and accurate measure of the information of interest.

The measure used was the Pearson product-moment correlation coefficient (r), which is a statistical measure of the relationship between two variables. In general, the larger the correlation value, the more highly one variable is related to another.

The results for selected sections of the Core Alcohol and Drug Survey are presented in Tables B·2 and B·3. In general, the data indicate that the Core Survey is a stable, reliable instrument.

Age of First Use: Data from this section indicated that respondents are highly reliable in their answering of these items. This is best indi-

Table B·2. Test-retest correlations for use questions.

Substance	Age of first use	Use in last year	Campus norms
Tobacco	.97	.99	.77
Alcohol	.95	.98	.79
Marijuana	.82	.98	.40
Cocaine	.99	1.00	.31
Amphetamines	.99	1.00	−.13
Sedatives	.69	.00	.03
Hallucinogens	.61	.00	.66
Opiates	1.00	.00	.58
Inhalants	1.00	.00	.62
Designer drugs	.00	.00	.49
Steroids	.00	.00	.41

cated by the relatively high correlations, ranging from .61 to 1.00. (See Table B·2.)

Use Within Last Year: Again, data indicate that these items – which have the potential of being responded to incorrectly – are yielding high correlations. The .00 correlations may be a result of no responses or nonsensical responses by students to the more socially "unacceptable" drugs.

Perceptions of Campus Norms: Tobacco, alcohol, and hallucinogens gave relatively stable correlations, indicating that people's perceptions about the use of these drugs remains consistent over time. Other drugs showed lower correlations, which may be accounted for by intervening events that may have altered respondents' perceptions of student use (such as local media campaigns to educate the public about drug use).

Table B·3. Test-retest correlations for consequence questions.

Consequence	Test-retest correlation
Hangover	.92
Poor test score	.62
Trouble with police, etc.	.68
Damaged property, fire alarm	.00
Argument or fight	.84
Nauseated or vomited	.96
Driven while intoxicated	.90
Missed a class	.86
Been criticized	.68
Thought I had a problem	1.00
Had a memory loss	.59
Later regretted action	.91
Arrested for DWI, DUI	00
Sexual advantage	.89
Tried, failed to stop	.97
Suicide attempt, thoughts	1.00

Consequences: There is a strong correlation between test and retest on almost all items in this section. (See Table B·3.) This indicates that respondents have a great reliability in reporting the frequency of consequences.

Item Reliability

The Core Alcohol and Drug Survey was designed to describe, by self-report, behaviors and perceptions of alcohol and drug use on campuses. Due to the scope and varied intended purposes of the questions, it became essential to analyze the reliability of items themselves. Cronbach alpha and item-to-total-test correlations were performed on questions 16, 17, 18, and 20 of the Core Survey. The corrected item-to-total-test correlations and Cronbach alpha scores for each question analyzed are displayed in Table B·4. Henryson (1971) notes that an "item-to-total-test correlation should fall between .3 to .7 for inclusion" in a survey test. The Cronbach alpha scores for items 16, 17, 18, and 20 meet those criteria in almost all cases. Correlation matrices for these items are reported in Table B·1.

Table B·4. Cronbach alpha scores for use and consequence questions.

Item	Item-total correlation	Alpha if item deleted
Question 16. Age of first use. (N=32,015.)		
Tobacco	.50	.79
Alcohol	.49	.77
Marijuana	.65	.75
Cocaine	.60	.77
Amphetamines	.61	.76
Sedatives	.53	.77
Hallucinogens	.59	.77
Opiates	.38	.79
Inhalants	.40	.78
Designer drugs	.39	.79
Steroids	.21	.79
Other drugs	.30	.78
Overall question alpha		.79
Question 17. Use within last year. (N=32,384.)		
Tobacco	.37	.68
Alcohol	.39	.61
Marijuana	.55	.56
Cocaine	.51	.61
Amphetamines	.45	.62
Sedatives	.39	.63
Hallucinogens	.53	.62
Opiates	.42	.63
Inhalants	.39	.63
Designer drugs	.44	.63
Steroids	.27	.64
Other drugs	.39	.63
Overall question alpha		.64

(continues)

Table B·4. *(cont.)* Cronbach alpha scores for use and consequence questions.

Item	Item-total correlation	Alpha if item deleted
Question 18. Perception of others' use. (N=29,803.)		
Tobacco	.40	.90
Alcohol	.35	.91
Marijuana	.58	.90
Cocaine	.70	.90
Amphetamines	.72	.89
Sedatives	.75	.89
Hallucinogens	.73	.89
Opiates	.72	.89
Inhalants	.66	.89
Designer drugs	.68	.89
Steroids	.60	.89
Other drugs	.67	.89
Overall question alpha		.90
Question 20. Consequences of use. (N=29,908.)		
Hangover	.69	.89
Poor test score	.64	.89
Trouble with police, etc.	.54	.90
Damaged property, fire alarm	.47	.90
Argument or fight	.66	.89
Nauseated or vomited	.65	.89
Driven while intoxicated	.61	.89
Missed a class	.69	.89
Been criticized	.63	.89
Thought I had a problem	.52	.90
Had a memory loss	.69	.89
Later regretted action	.76	.89
Arrested for DWI, DUI	.25	.90
Sexual advantage	.47	.90
Tried, failed to stop	.41	.90
Suicide attempt, thoughts	.31	.90
Been hurt, injured	.59	.90
Overall question alpha		.90

Factor Analysis

In order to explore the factor structure of the Core Alcohol and Drug Survey, a factor analysis was performed using a minimum eigenvalue of 1.0 and a three-factor structure. The factor structure accounted for 67 percent of the total variance. (See Table B·5.)

The first factor was made up primarily of responses to question 20 (consequences of alcohol and drug use), but included responses about marijuana use, students' perceptions of campus-wide use of alcohol, and average number of drinks consumed per week.

The second factor was related to students' perceptions of other students' use of drugs on campus and the age of first use of tobacco, cocaine, amphetamines, and sedatives. These may appear to be socially unacceptable and may therefore reflect a judgmental attitude of the respondents.

The third factor was inversely related to binge drinking and age of first use. It relied solely on responses regarding beverage alcohol.

Table B-5. Factor analysis on use and consequence questions.

Factor · Item		Factor loading
FACTOR 1. Alcohol- and drug-related adverse side effects		
15	Drinks per week	.77
16-c	Age of first use: marijuana	.60
17-c	Use in last year: marijuana	.60
18-b	Campus use perception: alcohol	.93
20-a	Hangover	.98
20-b	Poor test scores	.93
20-f	Nausea, vomited	.93
20-g	Driven while intoxicated	.93
20-h	Missed a class	.93
20-k	Memory loss	.93
20-l	Later regretted actions	.92
20-n	Sexual advantage	.93
FACTOR 2. Socially unacceptable drugs		
16-a	Age of first use: tobacco	.90
16-d	Age of first use: cocaine	−.88
16-e	Age of first use: amphetamines	−.88
16-f	Age of first use: sedatives	−.88
17-a	Use in last year: tobacco	−.75
17-b	Use in last year: alcohol	−.69
17-f	Use in last year: sedatives	−.88
18-a	Campus use perception: tobacco	.88
18-c	Campus use perception: marijuana	.88
18-d	Campus use perception: cocaine	.81
18-e	Campus use perception: amphetamines	.88
18-f	Campus use perception: sedatives	.81
18-g	Campus use perception: hallucinogens	.69
18-h	Campus use perception: opiates	.69
18-i	Campus use perception: inhalants	.81
18-j	Campus use perception: designer drugs	.69
18-l	Campus use perception: other drugs	.81
FACTOR 3. Alcohol use		
14	Five or more drinks in past two weeks	−.81
16-b	Age of first use: alcohol	−.63

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Appendix C. References

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Appendix D. About the Core Analysis Grantee Group

The Fipse Core Analysis Grantee Group was formed in 1988 to develop an evaluation instrument that would assist institutions of higher education in investigating the nature, scope, and consequences of alcohol and drug use on their campuses. The questionnaire the group developed, the Core Alcohol and Drug Survey, a statistically valid and reliable instrument, was designed for ease of administration and scoring and is specifically targeted to the postsecondary population. In addition, because it is used on numerous campuses, data from the Core Alcohol and Drug Survey can be aggregated as shown in this report and direct comparisons can be made between an institution and the aggregated totals.

Members of the Grantee Group include individuals associated with fy 1987 and fy 1988 Fipse institution-wide, drug prevention grants. Committee members represent large and small, two-year and four-year, residential and non-residential, and private and public institutions. The following individuals comprise the working Fipse Core Analysis Grantee Group:

Committee Members

Cheryl A. Presley, Ph.D., Chair of the Fipse Core Analysis Grantee Committee, is the Director of Quality Assurance, Evaluation, and Information Management for the Student Health Program at Southern Illinois University–Carbondale (siuc). She is the Project Director for the Core Analysis Grant which is responsible for this publication.

Philip W. Meilman, Ph.D., is Director of the Counseling Center at the College of William and Mary, Williamsburg, Virginia, and Research Associate Professor of Psychology. Dr. Meilman originally represented Dartmouth College on the Committee and continues to

serve as a consultant to Dartmouth's substance abuse program.

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Dear Colleague:

We are pleased to share with you the newest publication from the Core Institute entitled *Alcohol and Drugs on American College Campuses: Use, Consequences, and Perceptions of the Campus Environment, Volume 1: 1989-91.* This monograph is a detailed analysis of alcohol and other drug use on our nation's campuses and presents many noteworthy findings not previously reported in our earlier publications.

Of particular note is the chapter which describes the differences in usage patterns and consequences of use for students above and below the legal drinking age. In addition, there are fascinating contrasts in usage patterns and consequences of use for different regions of the country, and these are described in a separate chapter.

We hope that this monograph is a useful addition to your library. We encourage you to make this copy available to administrators and others who are involved in alcohol and drug prevention programming at your institution.

Additional copies may be ordered for a nominal fee by contacting the Core Institute at Southern Illinois University.

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